

## **CHAPTER 4**

### **POINT AND NONPOINT SOURCE CHARACTERIZATION OF THE OBEY RIVER WATERSHED**

#### **4.1 Background.**

#### **4.2. Characterization of HUC-10 Subwatersheds**

**4.2.A. 0513010501 (East Fork Obey River)**

**4.2.B. 0513010502 (West Fork Obey River)**

**4.2.C. 0513010503 (Obey River)**

**4.2.D. 0513010504 (Wolf River)**

**4.2.E. 0513010505 (Obey River)**

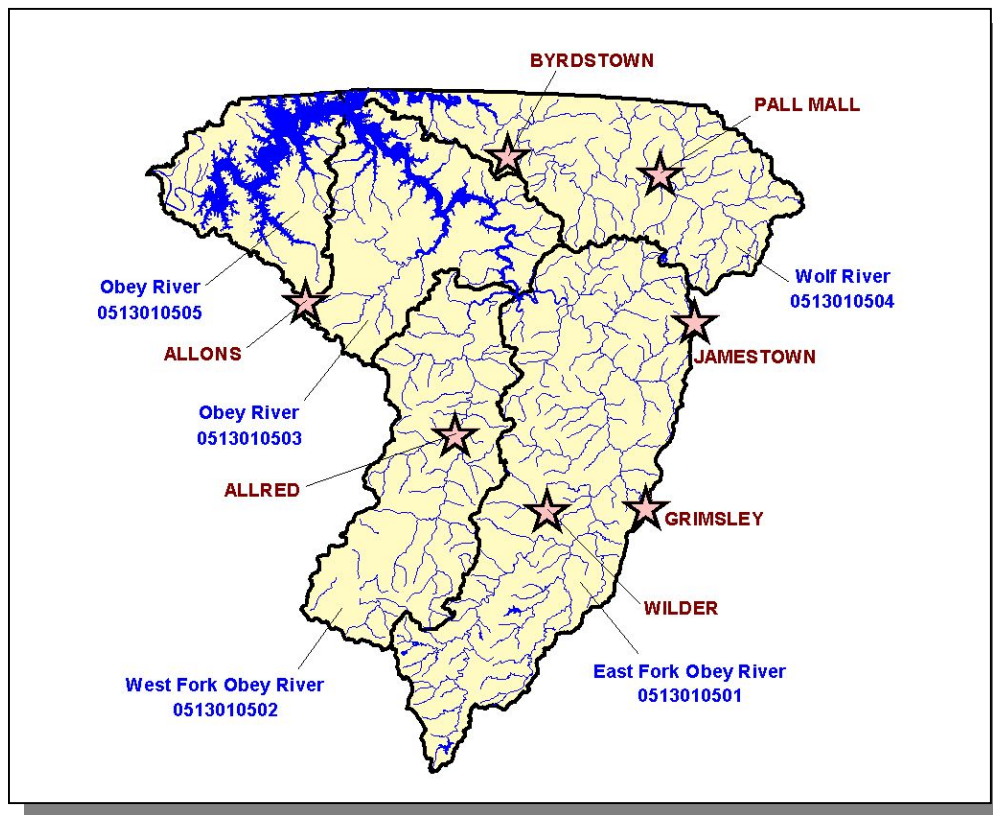
**4.1. BACKGROUND.** This chapter is organized by HUC-12 subwatershed, and the description of each subwatershed is divided into four parts:

- i. General description of the subwatershed
- ii. Description of point source contributions
  - ii.a. Description of facilities discharging to water bodies listed on the 2004 303(d) list
- iii. Description of nonpoint source contributions

The Tennessee portion of the Obey River Watershed (HUC 05130105) has been delineated into five HUC 10 (10-digit) subwatersheds, each of which is composed of one or more HUC-12 subwatersheds.

Information for this chapter was obtained from databases maintained by the Division of Water Pollution Control or provided in the WCS (Watershed Characterization System) data set. The WCS used was version 2.0 (developed by Tetra Tech, Inc for EPA Region 4) released in 2003.

WCS integrates with ArcView® v3.x and Spatial Analyst® v1.1 to analyze user-delineated (sub)watersheds based on hydrologically connected water bodies. Reports are generated by integrating WCS with Microsoft® Word. Land Use/Land Cover information from 1992 MRLC (Multi-Resolution Land Cover) data are calculated based on the proportion of county-based land use/land cover in user-delineated (sub)watersheds. Nonpoint source data in WCS are based on agricultural census data collected 1992–1998; nonpoint source data were reviewed by Tennessee NRCS staff.



**Figure 4-1. The Tennessee Portion of the Obey River Watershed is Composed of Five USGS-Delineated Subwatersheds (10-Digit Subwatersheds).** Locations of Allons, Allred, Byrdstown, Grimsley, Jamestown, Pall Mall, and Wilder are shown for reference.

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**4.2. CHARACTERIZATION OF HUC-10 SUBWATERSHEDS.** The Watershed Characterization System (WCS) software and data sets provided by EPA Region IV were used to characterize each subwatershed in the Tennessee portion of the Obey River Watershed.

HUC-10	HUC-12
0513010501	051301050101 (East Fork Obey River)
	051301050102 (East Fork Obey River)
	051301050103 (Hurricane Creek)
	051301050104 (East Fork Obey River)
	051301050105 Piney Creek)
	051301050106 (East Fork Obey River)
	051301050107 (Rockcastle Creek)
	051301050108 (Poplar Creek)
0513010502	051301050201 (West Fork Obey River)
	051301050202 (West Fork Obey River)
	051301050203 (West Fork Obey River)
0513010503	051301050301 (Obey River)
	051301050302 (Eagle Creek)
	051301050303 (Obey River)
0513010504	051301050401 (Wolf River)
	051301050402 (Rotten Fork Wolf River)
	051301050403 (Wolf River)
	051301050404 (Dale Hollow Lake)
	051301050405 (Spring Creek)
0513010505	051301050501 (Dale Hollow Lake)
	051301050502 (Sulphur Creek)
	051301050503 (Mitchell Creek)
	051301050504 (Obey River)

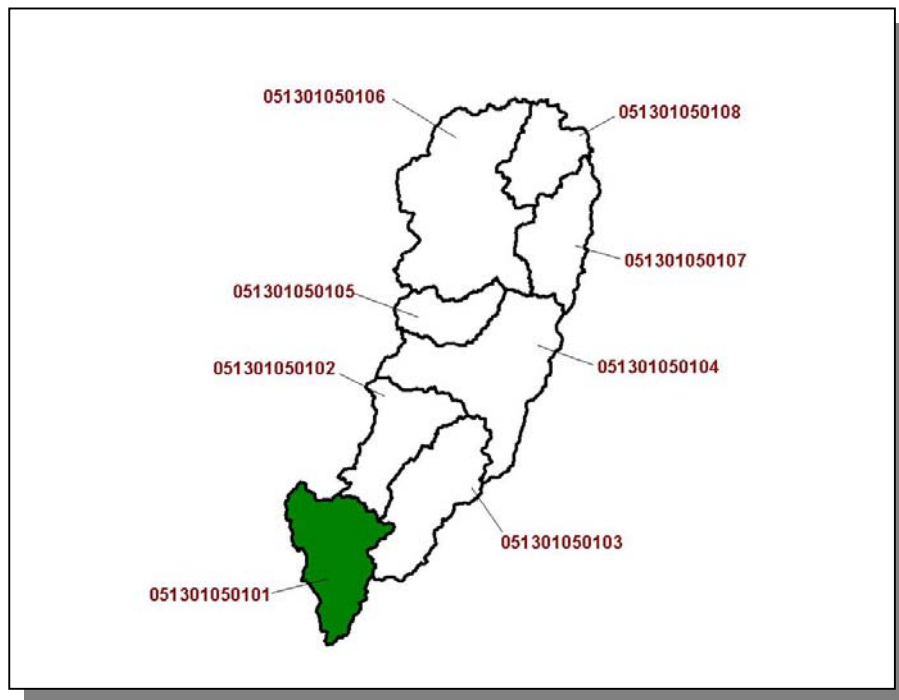
**Table 4-1. HUC-12 Drainage Areas are Nested Within HUC-10 Drainages.** NRCS worked with USGS to delineate the HUC-10 and HUC-12 drainage boundaries.

**4.2.A. 0513010501.**

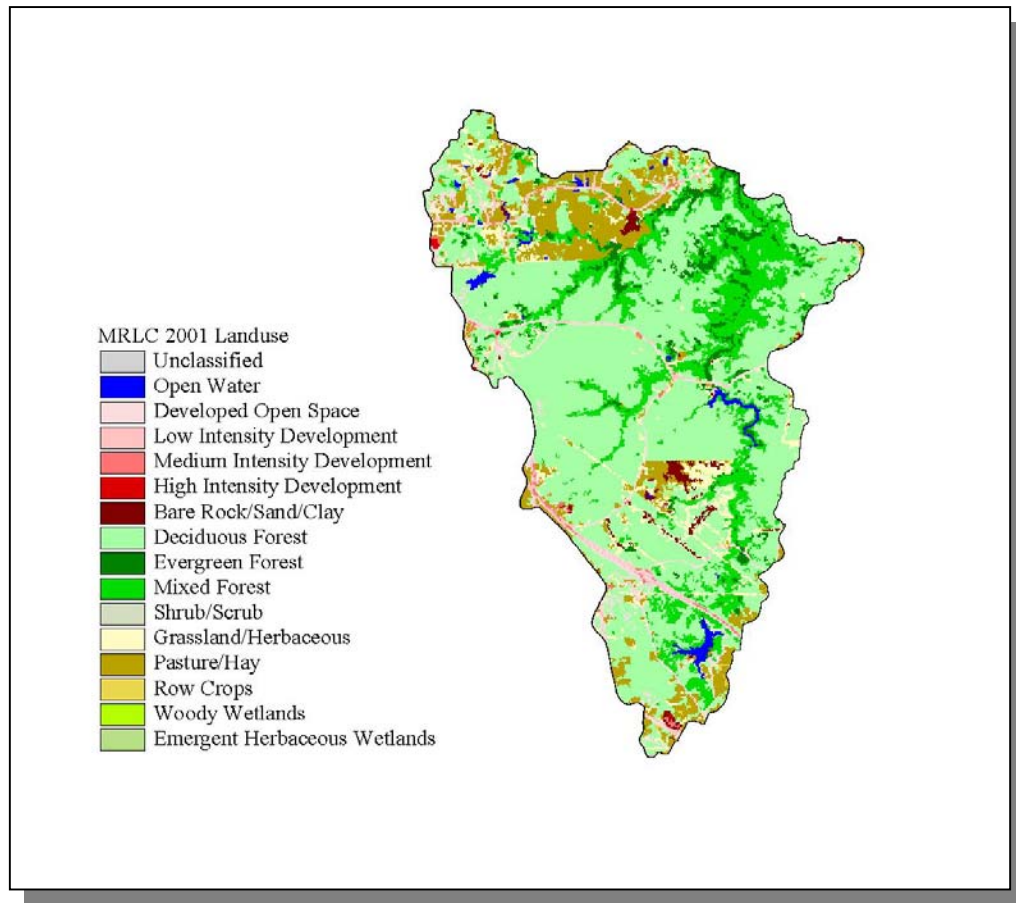


**Figure 4-2. Location of Subwatershed 0513010501.** All Obey River HUC-10 subwatershed boundaries in Tennessee are shown for reference.

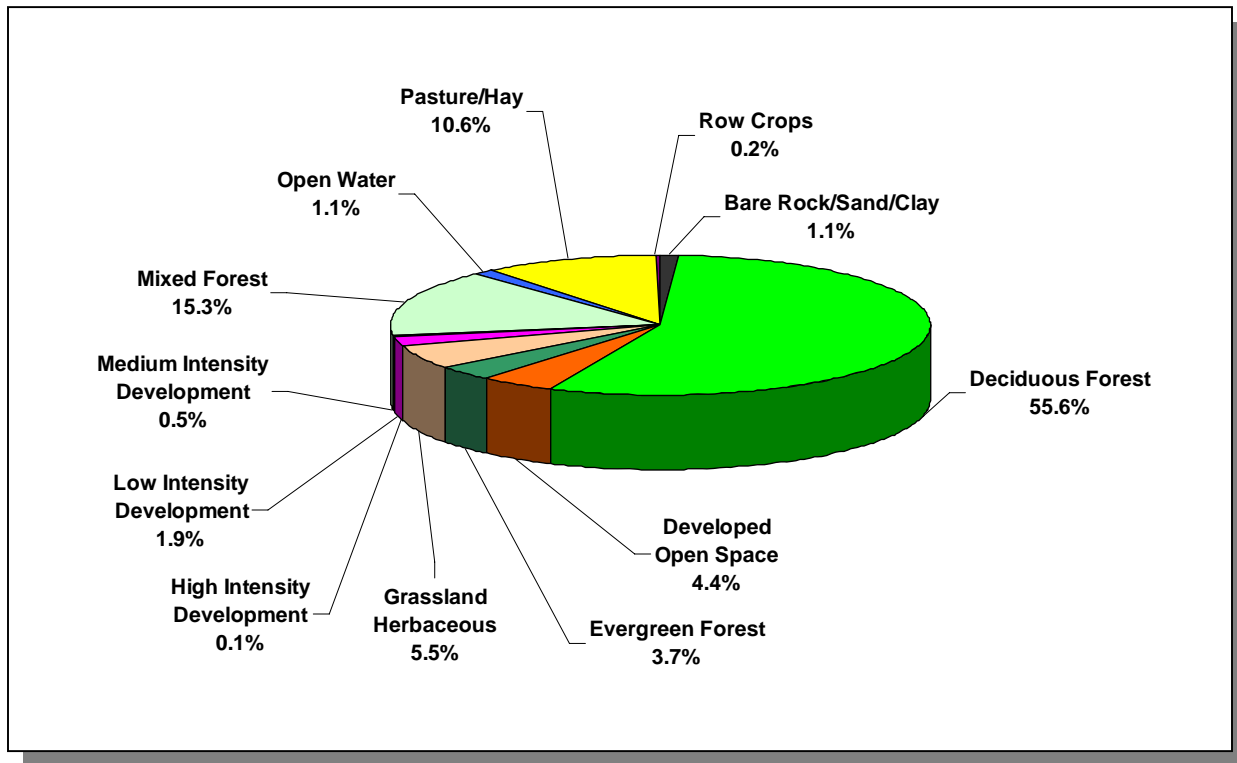
**4.2.A.i. 051301050101 (East Fork Obey River).**



**Figure 4-3. Location of Subwatershed 051301050101.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.

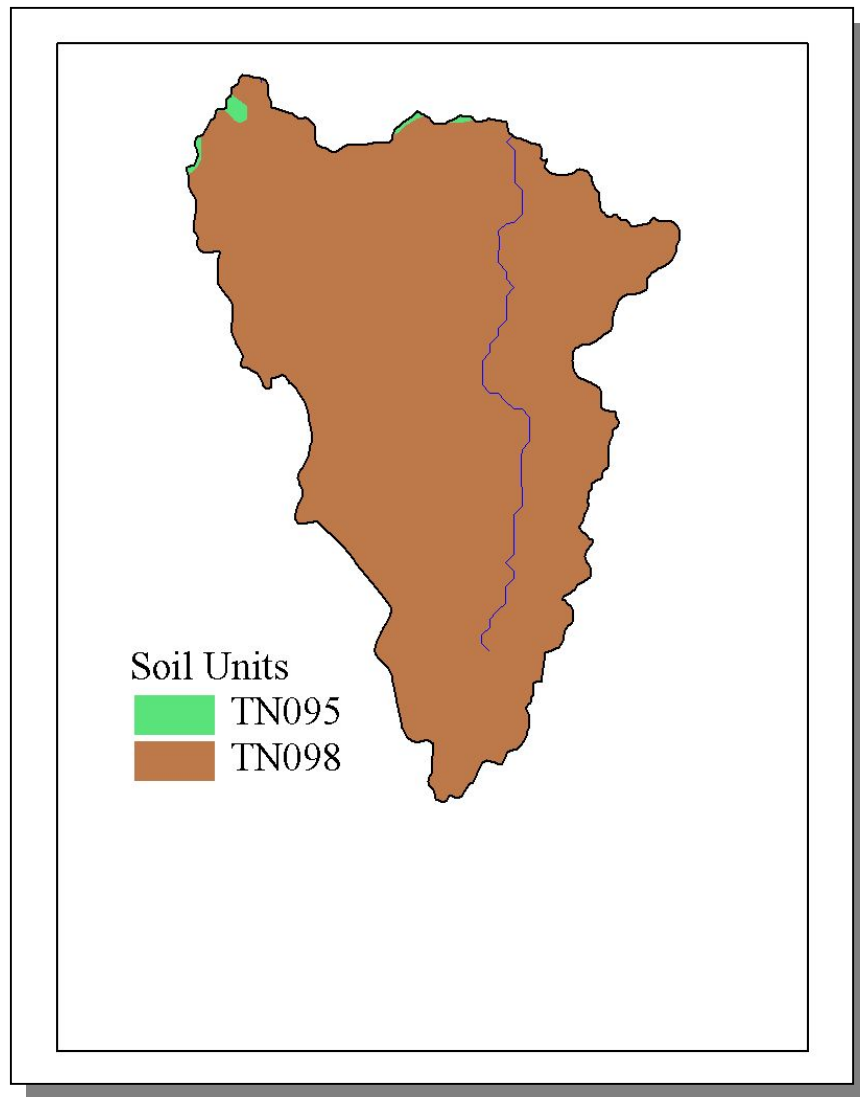


**Figure 4-4. Illustration of Land Use Distribution in Subwatershed 051301050101.**



**Figure 4-5. Land Use Distribution in Subwatershed 051301050101.** More information is provided in Appendix IV.

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**Figure 4-6. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050101.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN095	0.00	B	2.35	5.12	Loam	0.31
TN098	1.00	C	2.98	4.82	Loam	0.32

**Table 4-2. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050101.** The definition of “Hydrologic Group” is provided in Appendix IV.



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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Cumberland	34,736	43,217	46,802	1.63	566	705	763	34.8
Overton	17,636	19,171	20,118	0.24	43	46	49	14.0
Putnam	51,373	58,326	62,315	4.56	2,342	2,659	2,841	21.3
<b>Total</b>	<b>103,745</b>	<b>120,714</b>	<b>129,235</b>		<b>2,951</b>	<b>3,410</b>	<b>3,653</b>	<b>23.8</b>

*Table 4-3. Population Estimates in Subwatershed 051301050101.*

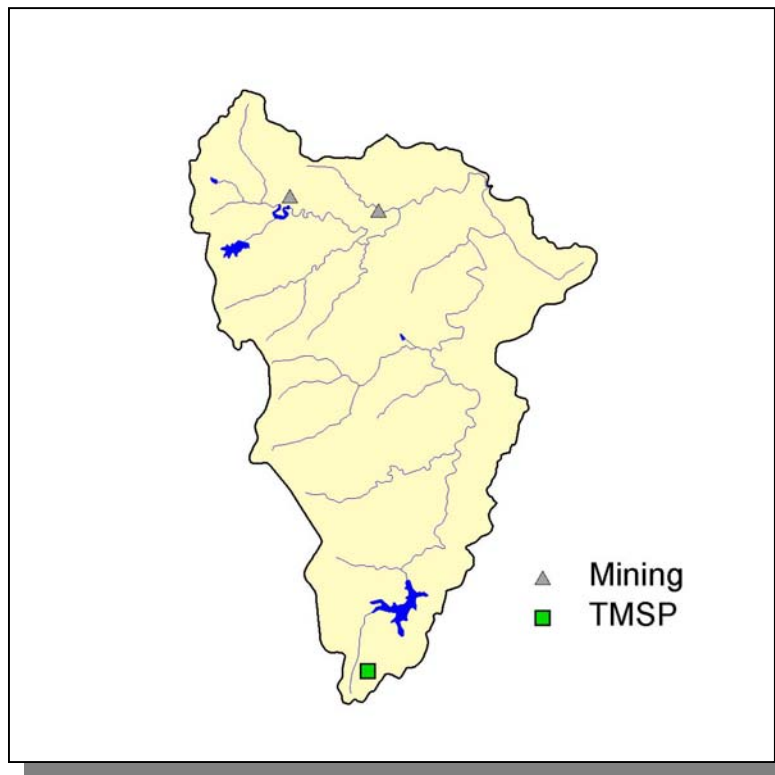
			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Monterey	Putnam	2,559	1,113	875	228	10

*Table 4-4. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051301050101.*

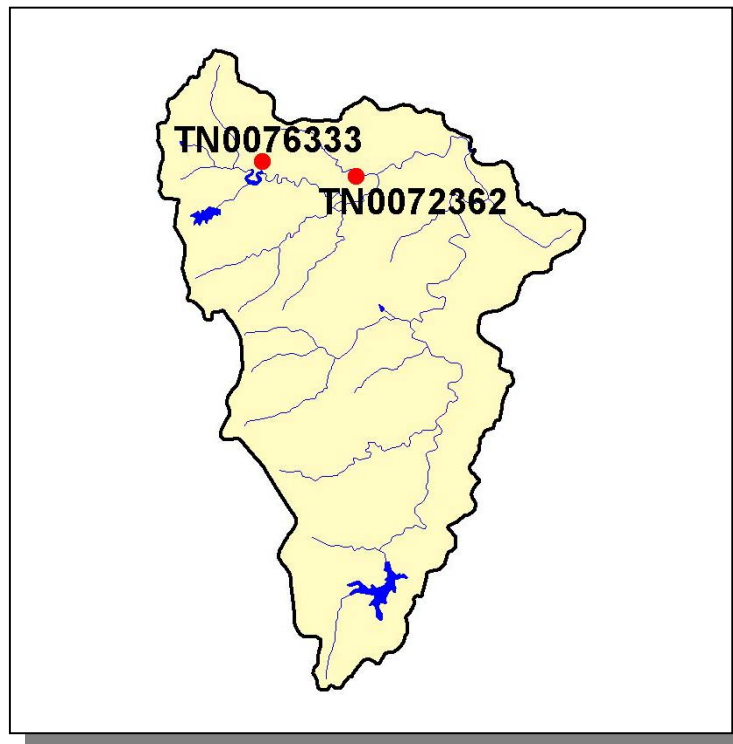


*Figure 4-7. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050101. More information, including site names and locations, is provided in Appendix IV.*

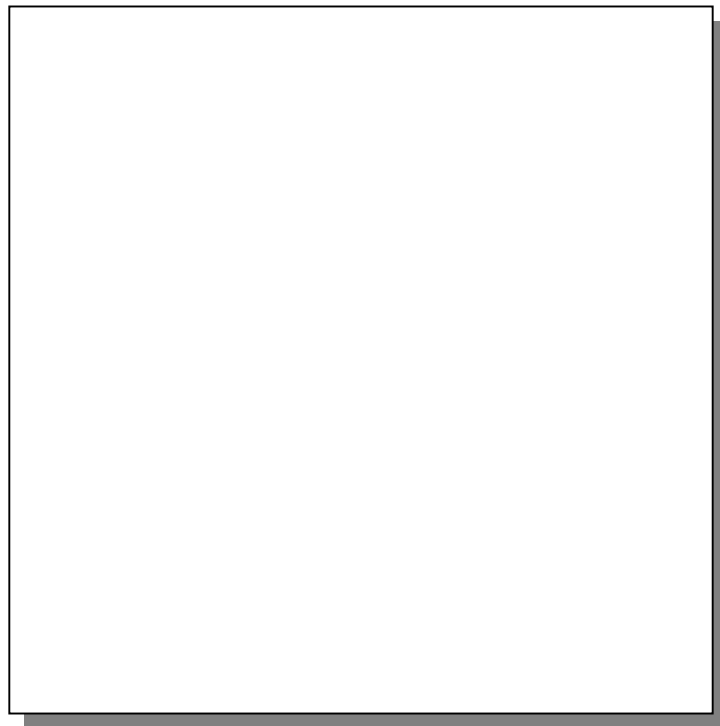
**4.2.A.i.a. Point Source Contributions.**



**Figure 4-8. Location of Permits Issued in Subwatershed 051301050101.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-9. Location of Active Mining Sites in Subwatershed 051301050101.** More information, including the names of mining operations, is provided in Appendix IV.



**Figure 4-10. Location of TMSP Sites in Subwatershed 051301050101.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.A.i.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
320	662	39	<5	66	5

**Table 4-5. Summary of Livestock Count Estimates in Subwatershed 051301050101.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Cumberland	9,468	23,179	2,296	43	6,038	461
Overton	15,150	27,812	1,200	1,173	811	59
Putnam	12,592	24,817	1,095	1,025	1,070	66

**Table 4-6. Summary of Livestock Count Estimates in Cumberland, Overton, and Putnam Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

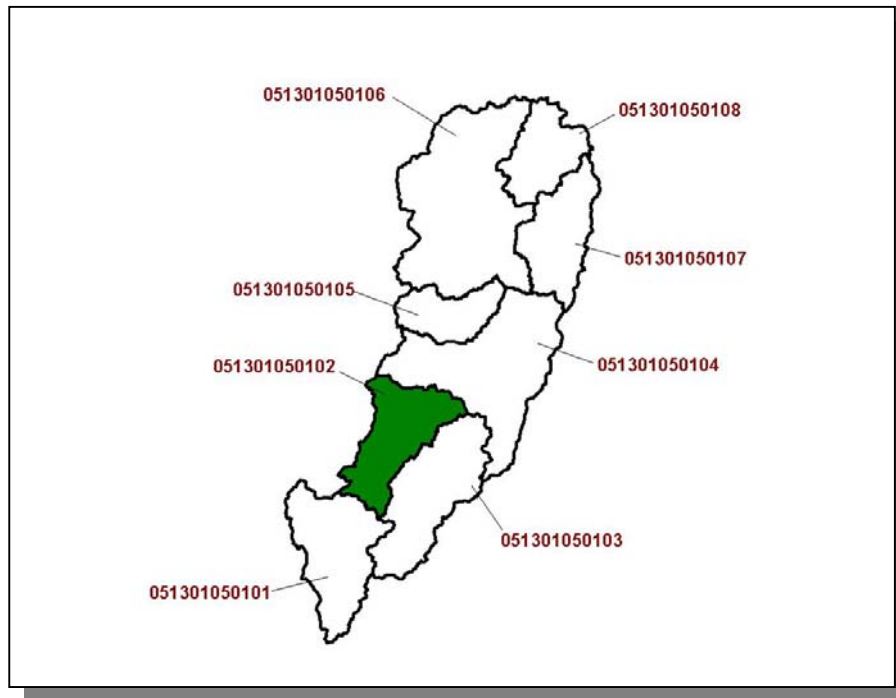
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Cumberland	320.3	320.3	5.9	22.5
Overton	170.3	170.3	1.7	7.0
Putnam	152.5	152.5	3.6	16.4

**Table 4-7. Forest Acreage and Annual Removal Rates (1987-1994) in Cumberland, Overton, and Putnam Counties.**

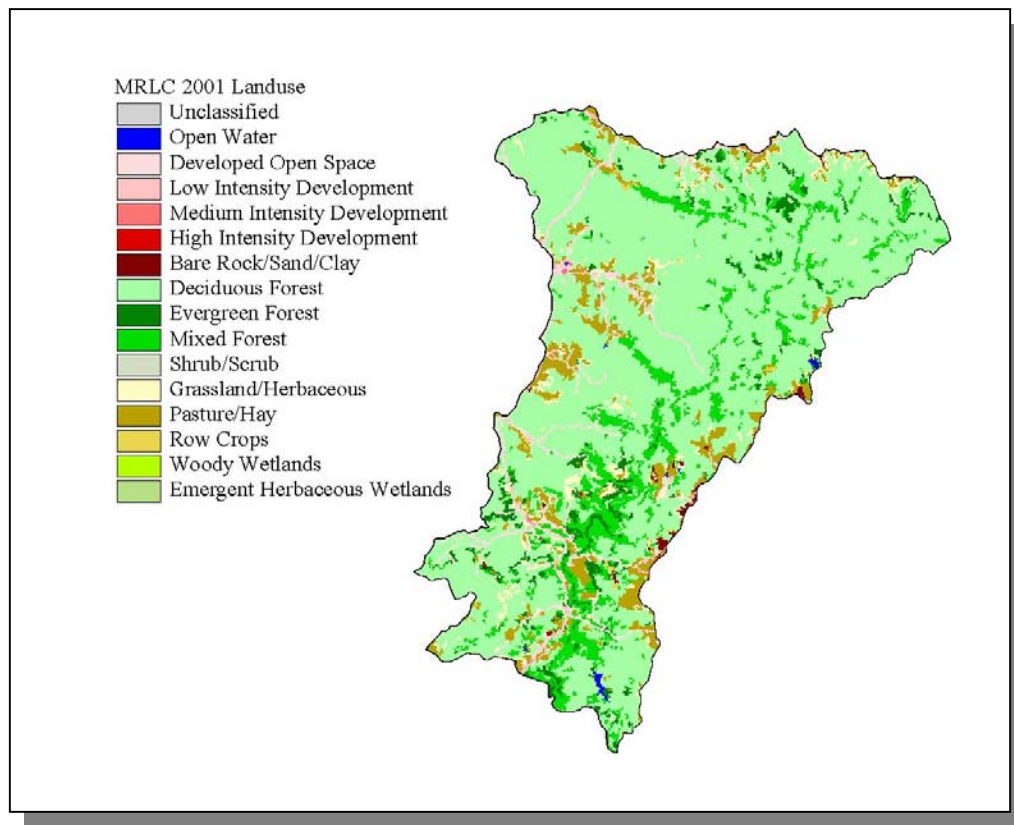
CROPS	TONS/ACRE/YEAR
Legumes (Pastureland)	0.15
Grass (Pastureland)	1.30
Grass (Hayland)	2.10
Legumes, Grass (Hayland)	0.53
Legumes (Hayland)	0.23
Grass, Forbs, Legumes (Mixed Pasture)	0.70
Corn (Row Crops)	3.82
Soybeans (Row Crops)	6.65
Wheat (Close-Grown Cropland)	7.00
Tobacco (Row Crops)	12.38
Other Vegetable and Truck Crops	14.63
Conservation Reserve Program Lands	0.46
Farmsteads and Ranch Headquarters	0.23

**Table 4-8. Annual Estimated Total Soil Loss in Subwatershed 051301050101.**

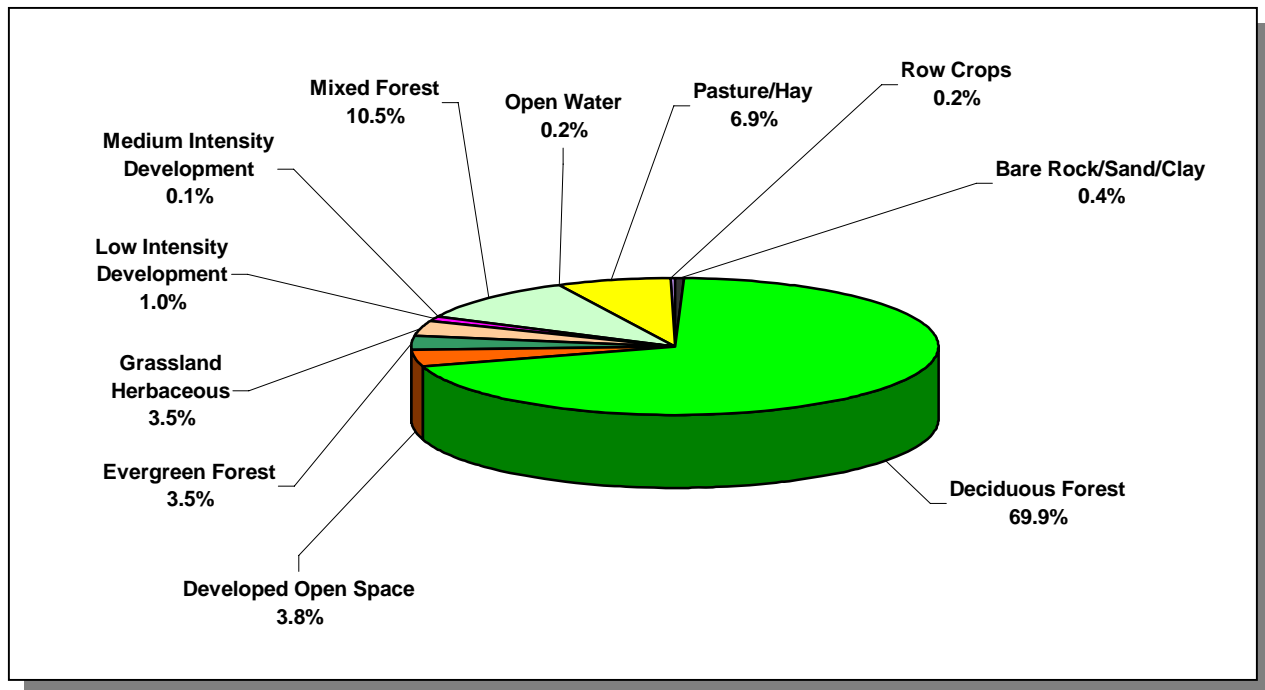
**4.2.A.ii. 051301050102 (East Fork Obey River).**



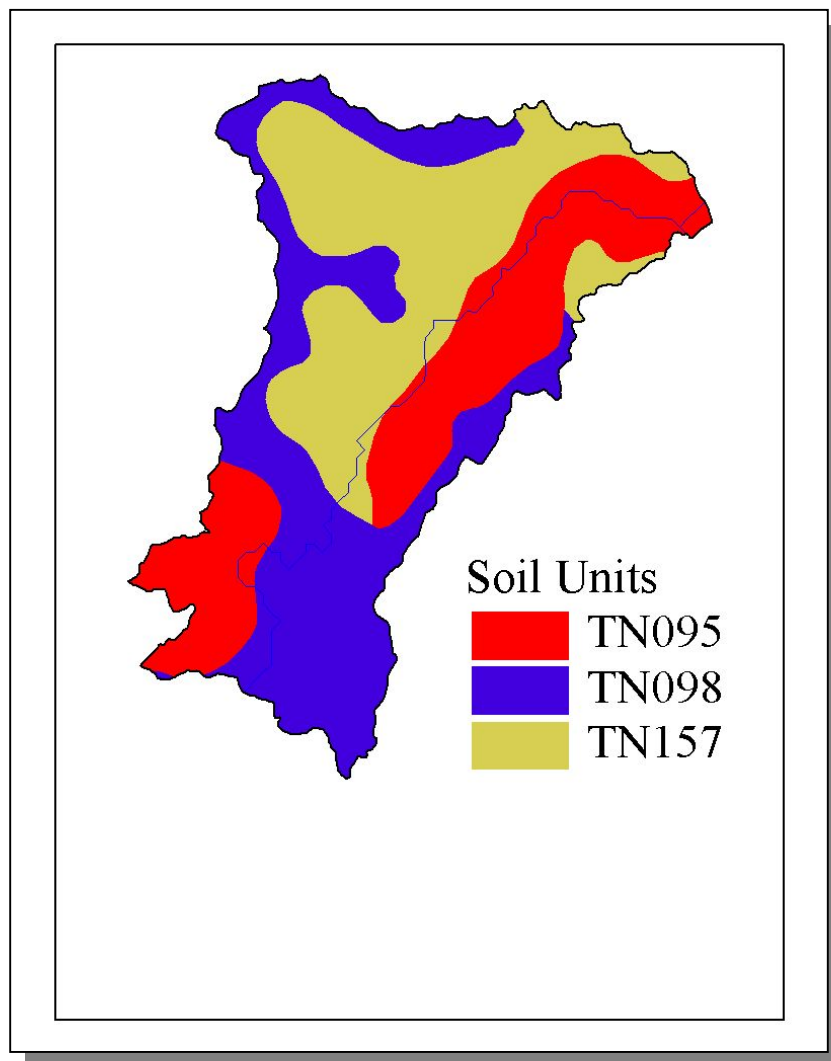
**Figure 4-11. Location of Subwatershed 051301050102.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.



**Figure 4-12. Illustration of Land Use Distribution in Subwatershed 051301050102.**



*Figure 4-13. Land Use Distribution in Subwatershed 051301050102. More information is provided in Appendix IV.*



**Figure 4-14. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050102.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN095	0.00	B	2.35	5.12	Loam	0.31
TN098	1.00	C	2.98	4.82	Loam	0.32
TN157	0.00	B	2.38	4.62	Loam	0.28

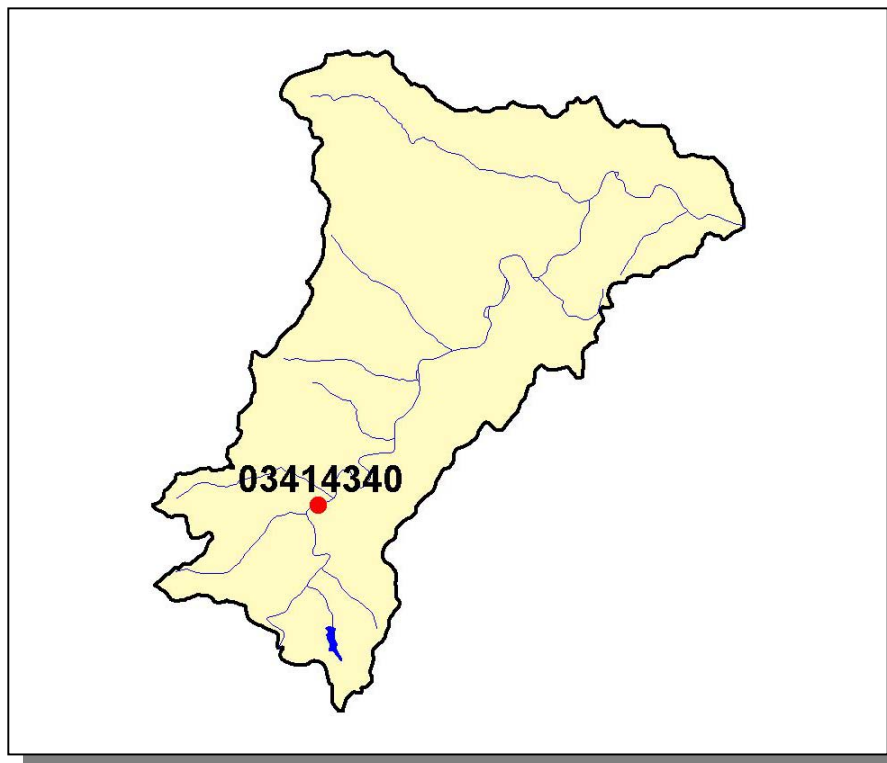
**Table 4-9. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050102.** The definition of "Hydrologic Group" is provided in Appendix IV.



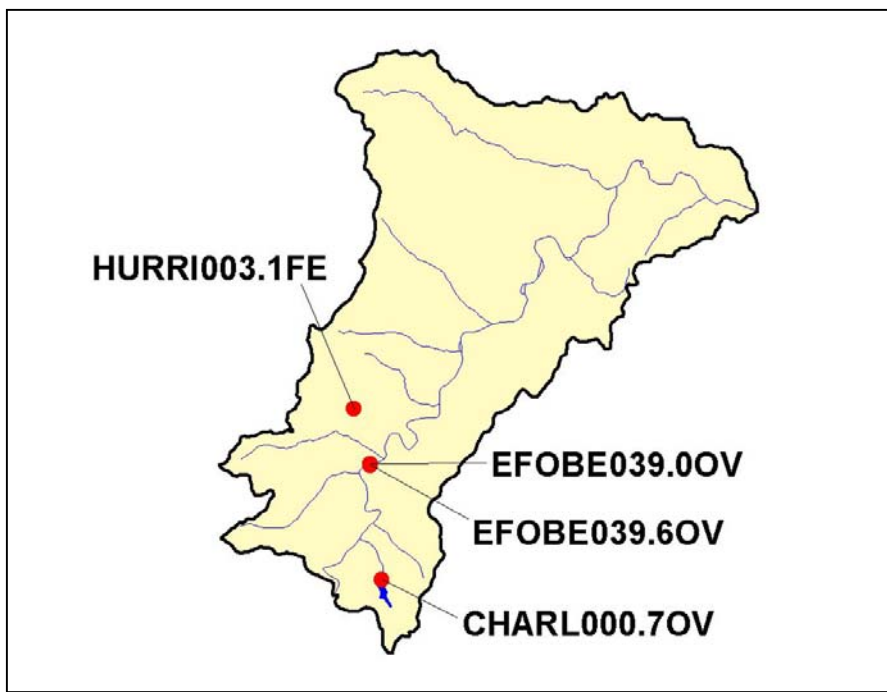
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	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	Portion of Watershed (%)	1990	1997	2000	% Change (1990-2000)
Fentress	14,669	15,920	16,625	0.3	45	48	50	11.1
Overton	17,636	19,171	20,118	5.6	988	1,074	1,128	14.2
Putnam	51,373	58,326	62,315	0.06	28	32	34	21.4
<b>Total</b>	<b>83,678</b>	<b>93,417</b>	<b>99,058</b>		<b>1,061</b>	<b>1,154</b>	<b>1,212</b>	<b>14.2</b>

*Table 4-10. Population Estimates in Subwatershed 051301050102.*



**Figure 4-15. Location of Historical Streamflow Data Collection Sites in Subwatershed 051301050102.** More information is provided in Appendix IV.



**Figure 4-16. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050102.** More information, including site names and locations, is provided in Appendix IV.

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**4.2.A.ii.a. Point Source Contributions.**

There are no point source contributions in this subwatershed.

**4.2.A.ii.b. Nonpoint Source Contributions.**

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
168	308	13	<5	515	9	<5

**Table 4-11. Summary of Livestock Count Estimates in Subwatershed 051301050102.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

<b>LIVESTOCK COUNTS</b>							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Fentress	8,058	17,259	430	474	7,290,026	729	79
Overton	15,150	27,812	1,200	1,173	0	811	59
Putnam	12,592	24,817	1,095	1,025	0	1,070	66

**Table 4-12. Summary of Livestock Count Estimates in Fentress, Overton, and Putnam Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Fentress	244.1	244.1	3.6	14.3
Overton	170.3	170.3	1.7	7.0
Putnam	152.5	152.5	3.6	16.4

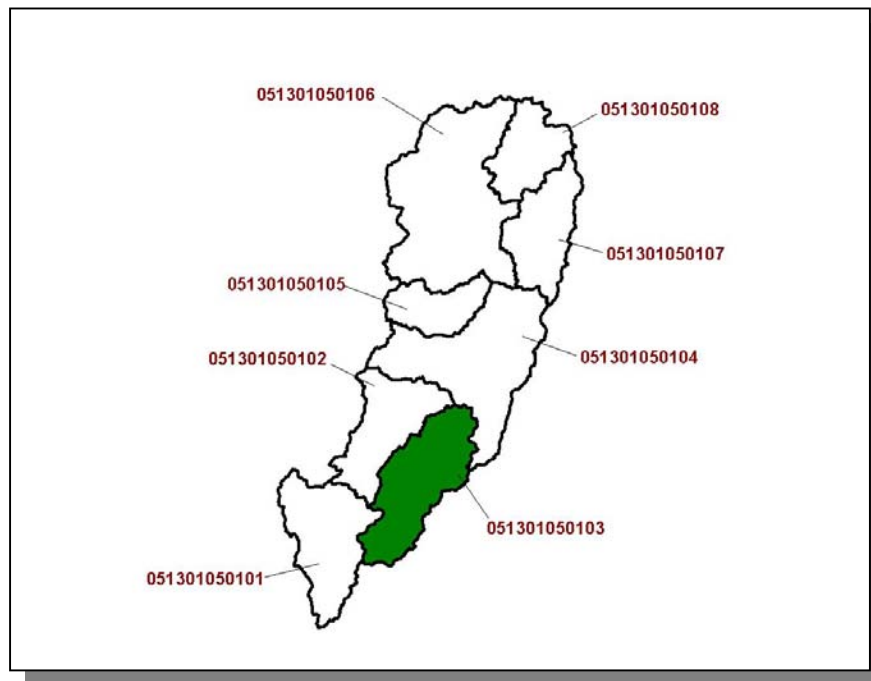
**Table 4-13. Forest Acreage and Annual Removal Rates (1987-1994) in Fentress, Overton, and Putnam Counties.**

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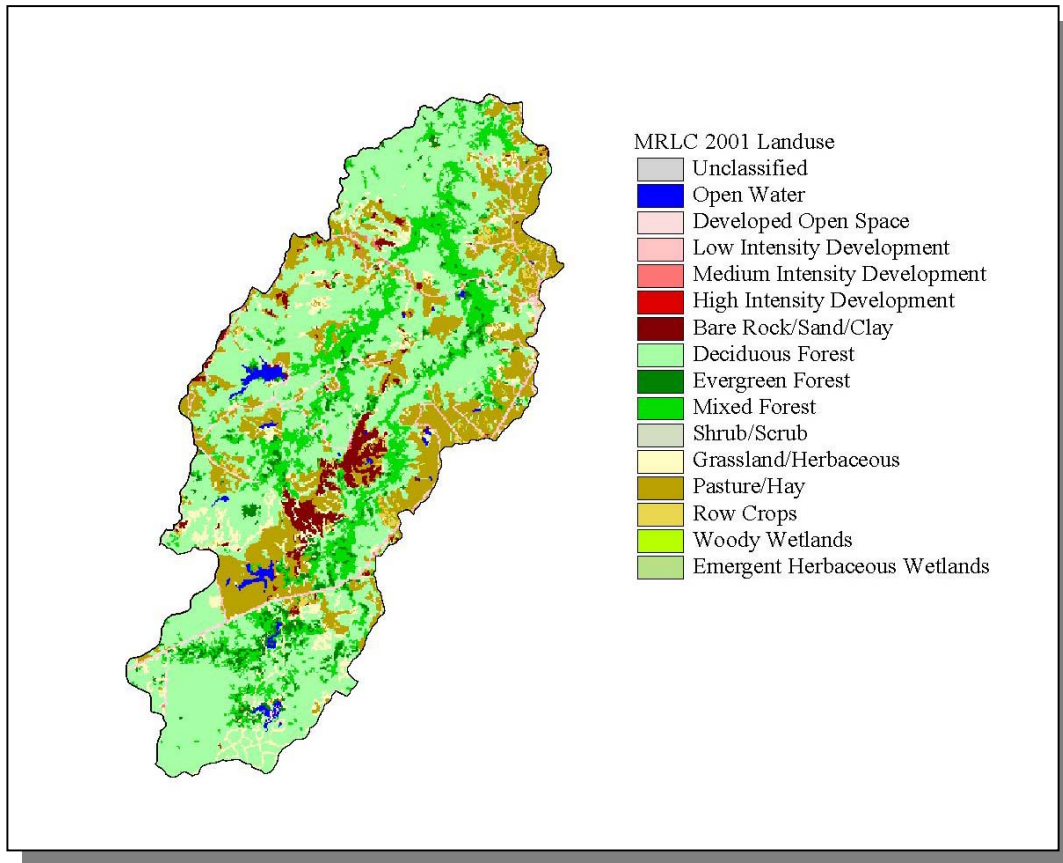
<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Grass (Pastureland)	0.30
Grass (Hayland)	0.32
Legumes, Grass (Hayland)	2.74
Legumes (Hayland)	0.23
Grass, Forbs, Legumes (Mixed Pasture)	0.64
Corn (Row Crops)	5.03
Soybeans (Row Crops)	10.51
Tobacco (Row Crops)	12.38
Wheat (Close-Grown Cropland)	9.11
Other Vegetable and Truck Crops	21.08
Conservation Reserve Program Lands	0.46
Farmsteads and Ranch Headquarters	0.57

**Table 4-14. Annual Estimated Total Soil Loss in Subwatershed 051301050102.**

**4.2.A.iii.** 051301050103 (Hurricane Creek).

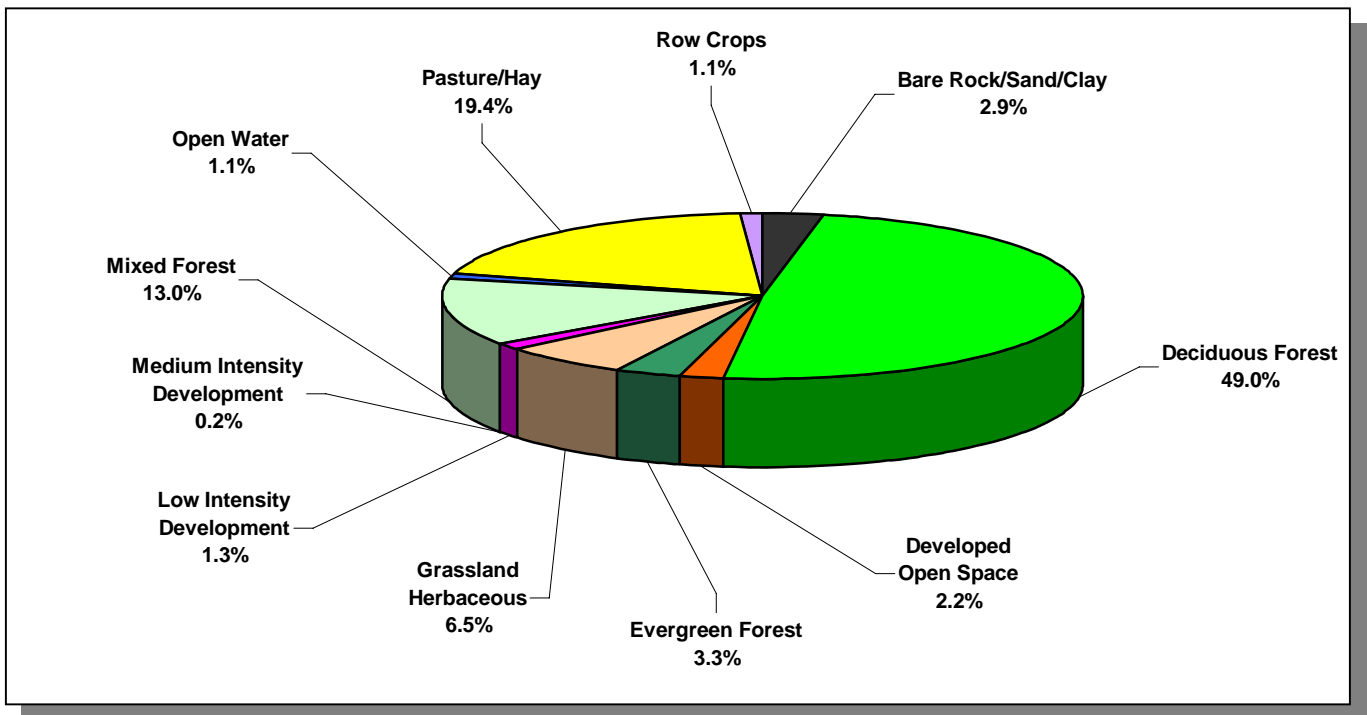


**Figure 4-17. Location of Subwatershed 051301050103.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.

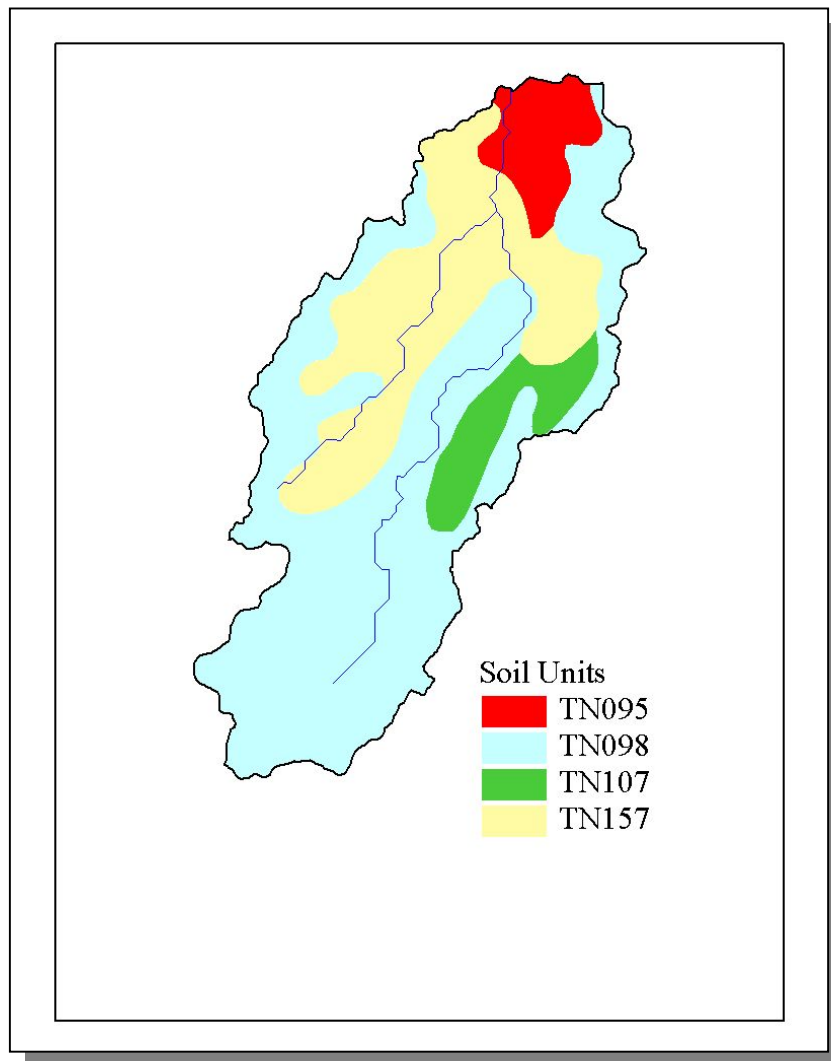


**Figure 4-18. Illustration of Land Use Distribution in Subwatershed 051301050103.**

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*Figure 4-19. Land Use Distribution in Subwatershed 051301050103. More information is provided in Appendix IV.*



**Figure 4-20. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050103.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN095	0.00	B	2.35	5.12	Loam	0.31
TN098	1.00	C	2.98	4.82	Loam	0.32
TN107	1.00	C	6.34	4.84	Loam	0.28
TN157	0.00	B	2.38	4.62	Loam	0.28

**Table 4-15. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050103.** The definition of "Hydrologic Group" is provided in Appendix IV.



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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Cumberland	34,736	43,217	46,802	0.65	227	283	306	34.8
Fentress	14,669	15,920	16,625	2.42	355	386	403	13.5
Overton	17,636	19,171	20,118	2.46	434	471	495	14.1
Putnam	51,373	58,326	62,315	1.63	837	950	1,015	21.3
<b>Total</b>	<b>118,414</b>	<b>136,634</b>	<b>145,860</b>		<b>1,853</b>	<b>2,090</b>	<b>2,219</b>	<b>19.8</b>

*Table 4-16. Population Estimates in Subwatershed 051301050103.*



*Figure 4-21. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050103. More information, including site names and locations, is provided in Appendix IV.*

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**4.2.A.iii.a. Point Source Contributions.**

There are no point source contributions in this subwatershed.

**4.2.A.iii.b. Nonpoint Source Contributions.**

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
602	1,229	42	<5	307,092	57	5

**Table 4-17. Summary of Livestock Count Estimates in Subwatershed 051301050103.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

<b>LIVESTOCK COUNTS</b>							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Cumberland	9,468	23,179	2,296	43	0	6,038	461
Fentress	8,058	17,259	430	474	7,290,026	729	79
Overton	15,150	27,812	1,200	1,173	0	811	59
Putnam	12,592	24,817	1,095	1,025	0	1,070	66

**Table 4-18. Summary of Livestock Count Estimates in Cumberland, Fentress, Overton, and Putnam Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Cumberland	320.3	320.3	5.9	22.5
Fentress	244.1	244.1	3.6	14.3
Overton	170.3	170.3	1.7	7.0
Putnam	152.5	152.3	3.6	16.4

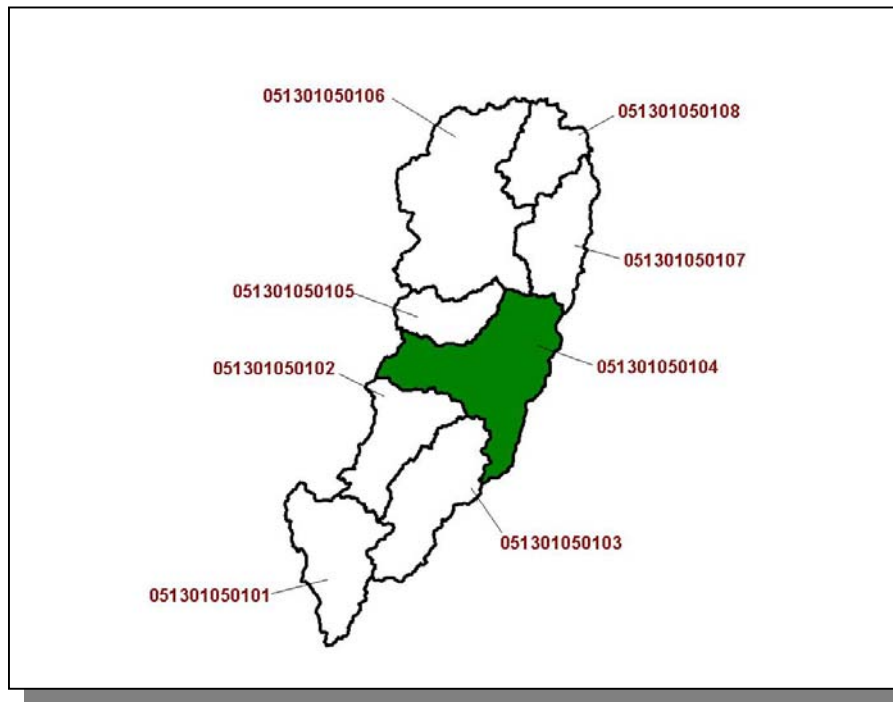
**Table 4-19. Forest Acreage and Annual Removal Rates (1987-1994) in Cumberland, Fentress, Overton, and Putnam Counties.**

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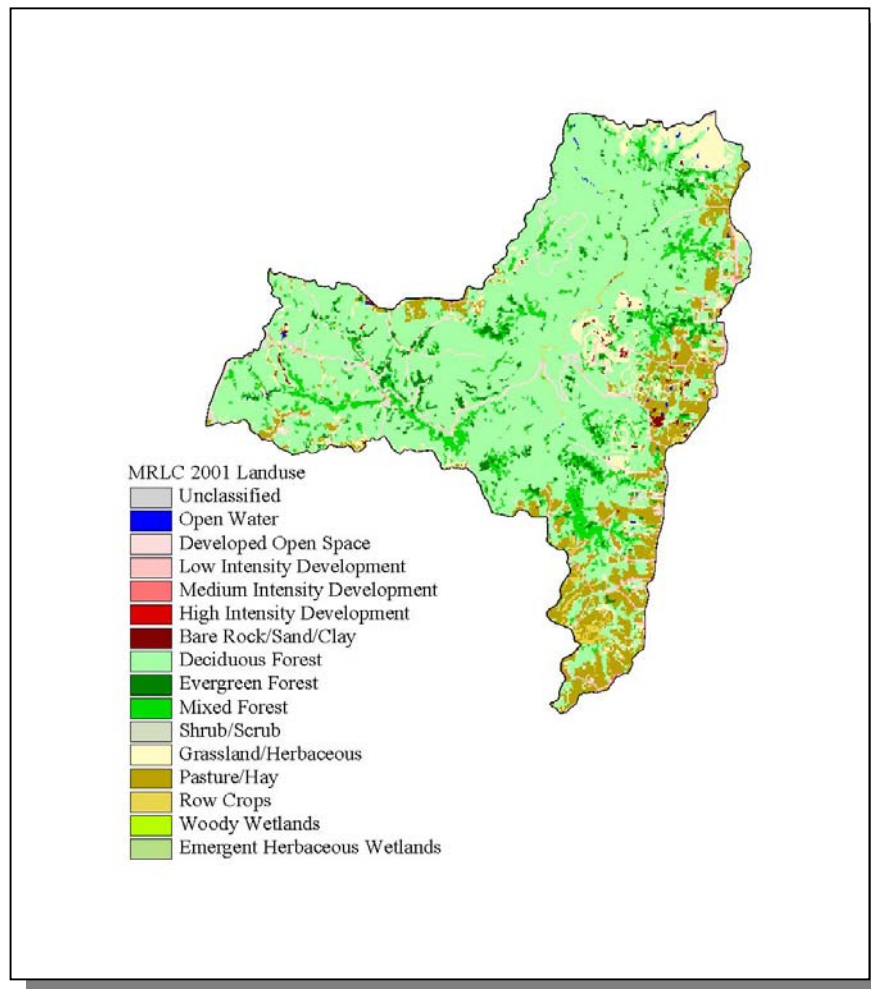
<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Legumes (Pastureland)	0.15
Grass (Pastureland)	0.76
Grass (Hayland)	1.27
Legumes, Grass (Hayland)	1.26
Legumes (Hayland)	0.23
Grass, Forbs, Legumes (Mixed Pasture)	0.53
Corn (Row Crops)	9.47
Soybeans (Row Crops)	7.93
Tobacco (Row Crops)	12.38
Wheat (Close-Grown Cropland)	26.23
Other Vegetable and Truck Crops	17.18
Conservation Reserve Program Lands	0.46
Farmsteads and Ranch Headquarters	0.40

**Table 4-20. Annual Estimated Total Soil Loss in Subwatershed 051301050103.**

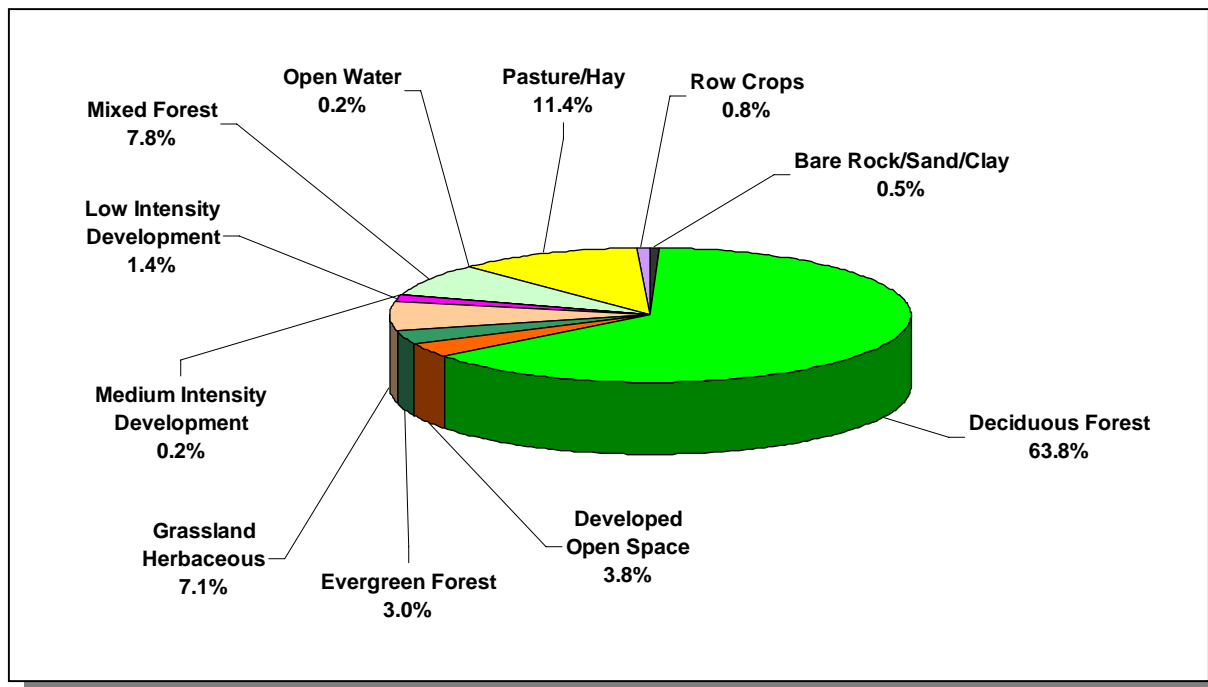
**4.2.A.iv. 051301050104 (East Fork Obey River).**



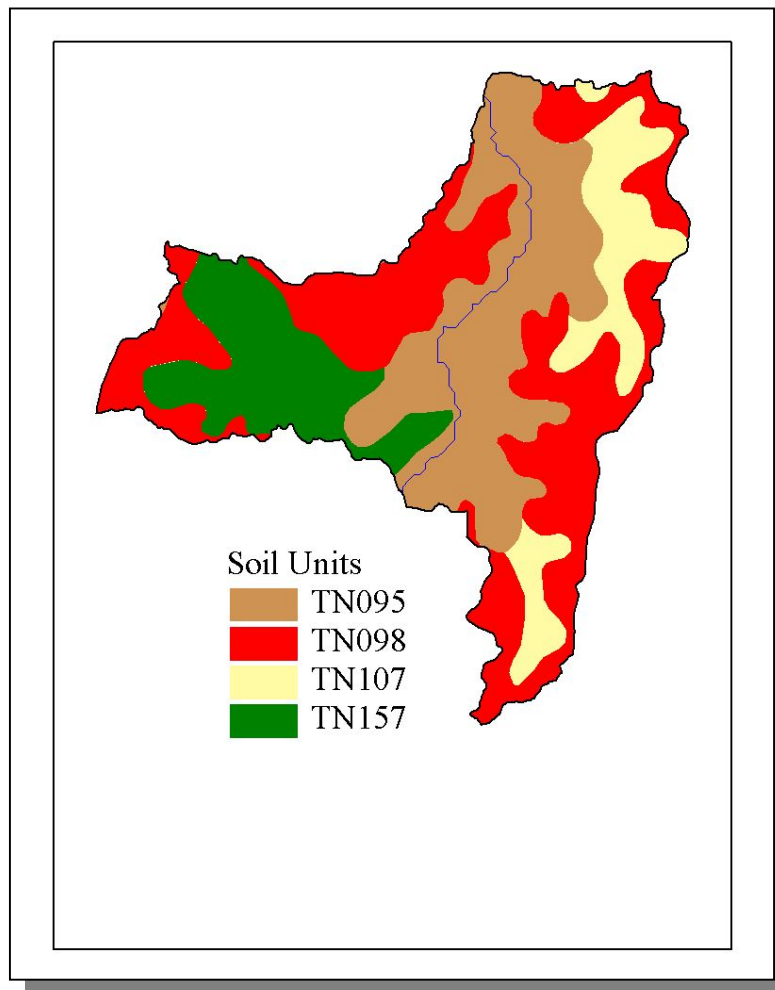
**Figure 4-22. Location of Subwatershed 051301050104.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.



**Figure 4-23. Illustration of Land Use Distribution in Subwatershed 051301050104.**



**Figure 4-24. Land Use Distribution in Subwatershed 051301050104.** More information is provided in Appendix IV.



**Figure 4-25. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050104.**

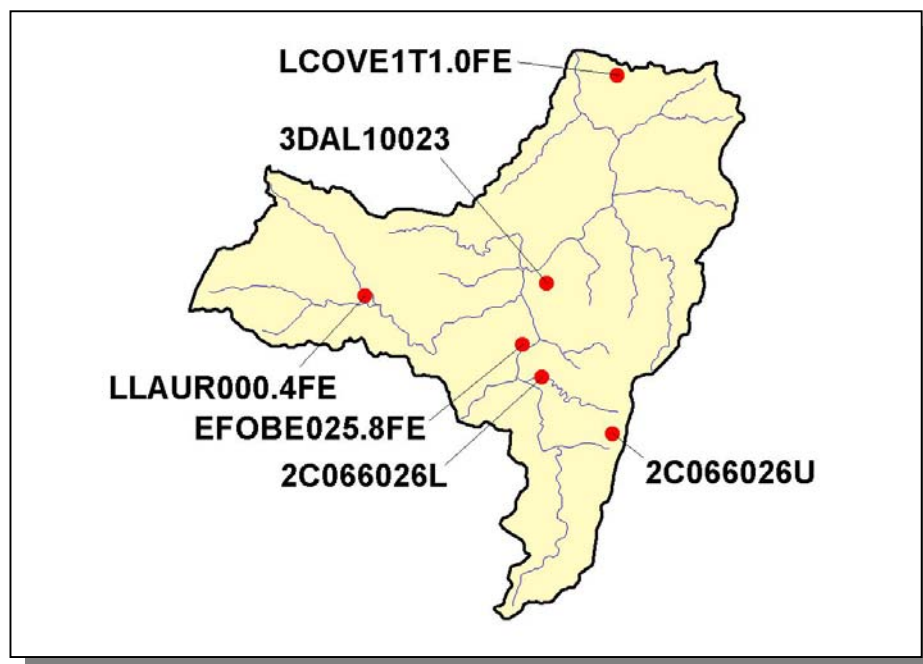
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN095	0.00	B	2.35	5.12	Loam	0.31
TN098	1.00	C	2.98	4.82	Loam	0.32
TN107	1.00	C	6.34	4.84	Loam	0.28
TN157	0.00	B	2.38	4.62	Loam	0.28

**Table 4-21. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050104.** The definition of "Hydrologic Group" is provided in Appendix IV.

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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Fentress	14,669	15,920	16,625	8.65	1,269	1,377	1,438	13.3
Overton	17,636	19,171	20,118	1.67	295	320	336	13.9
<b>Total</b>	<b>32,305</b>	<b>35,091</b>	<b>36,743</b>		<b>1,564</b>	<b>1,697</b>	<b>1,774</b>	<b>13.4</b>

*Table 4-22. Population Estimates in Subwatershed 051301050104.*



*Figure 4-26. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050104. More information, including site names and locations, is provided in Appendix IV.*



**4.2.A.iv.a. Point Source Contributions.**



**Figure 4-27. Location of Permits Issued in Subwatershed 051301050104.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-28. Location of Active Mining Sites in Subwatershed 051301050104.** More information, including the names of mining operations, is provided in Appendix IV.

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**4.2.A.iv.b. Nonpoint Source Contributions.**

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
591	1,257	32	<5	509,675	52	6

**Table 4-23. Summary of Livestock Count Estimates in Subwatershed 051301050104.**

According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

<b>LIVESTOCK COUNTS</b>							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Fentress	8,058	17,259	430	474	7,290,026	729	79
Overton	15,150	27,812	1,200	1,173	0	811	59

**Table 4-24. Summary of Livestock Count Estimates in Fentress and Overton Counties.**

According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

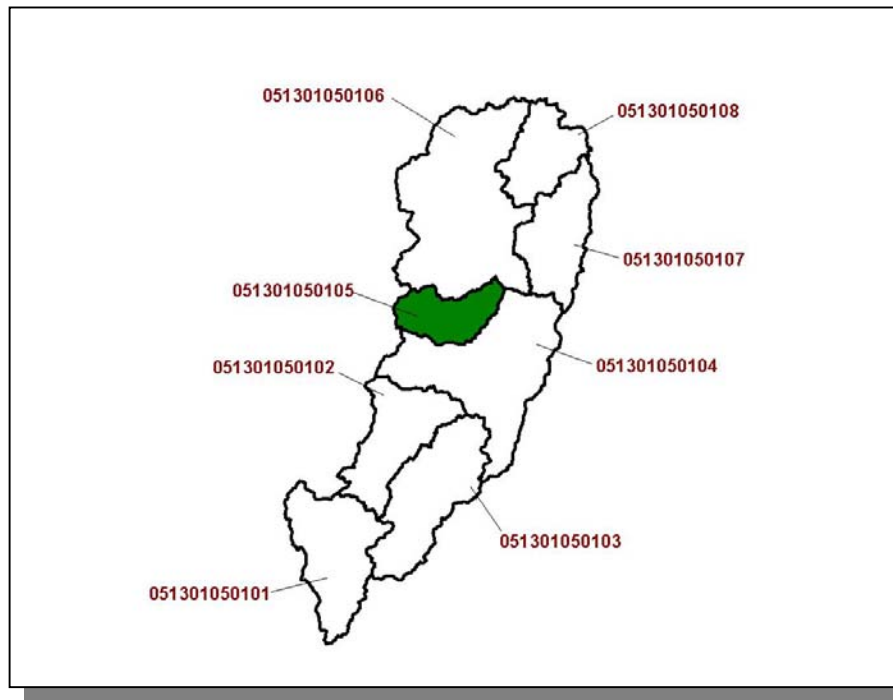
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Fentress	244.1	244.1	3.6	14.3
Overton	170.3	170.3	1.7	7.0

**Table 4-25. Forest Acreage and Annual Removal Rates (1987-1994) in Fentress and Overton Counties.**

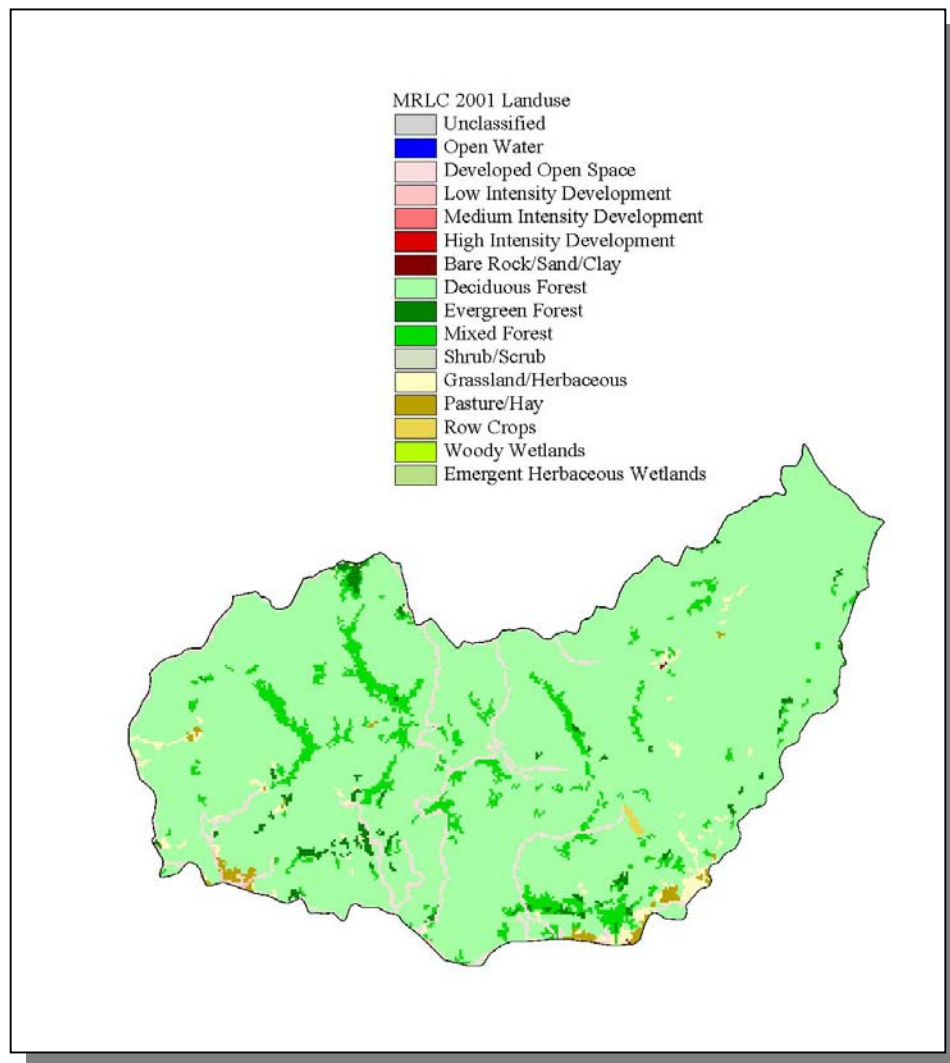
<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Grass (Pastureland)	0.65
Grass (Hayland)	0.31
Legumes, Grass (Hayland)	0.90
Grass, Forbs, Legumes (Mixed Pasture)	0.33
Corn (Row Crops)	14.46
Soybeans (Row Crops)	6.69
Wheat (Close-Grown Cropland)	38.11
Other Vegetable and Truck Crops	16.75
Conservation Reserve Program Lands	0.46
Farmsteads and Ranch Headquarters	0.42

**Table 4-26. Annual Estimated Total Soil Loss in Subwatershed 051301050104.**

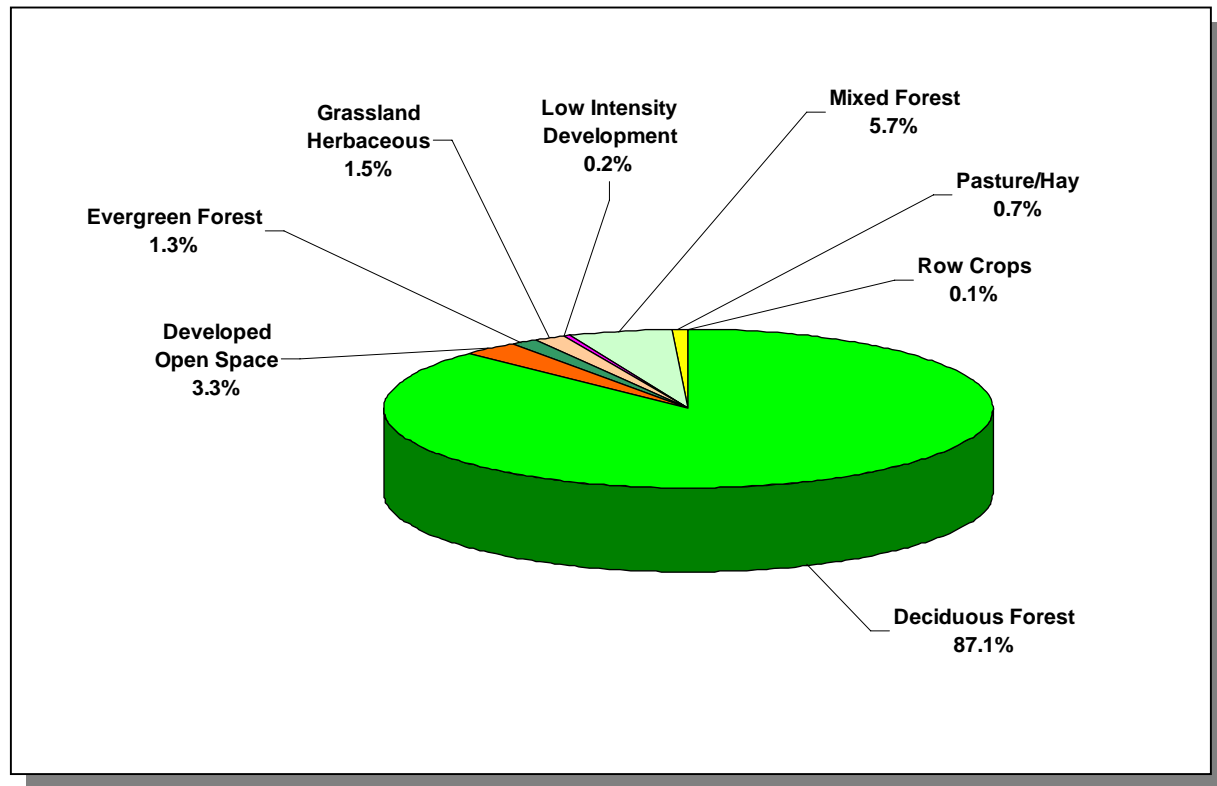
**4.2.A.v. 051301050105 (Piney Creek).**



**Figure 4-29. Location of Subwatershed 051301050105.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.

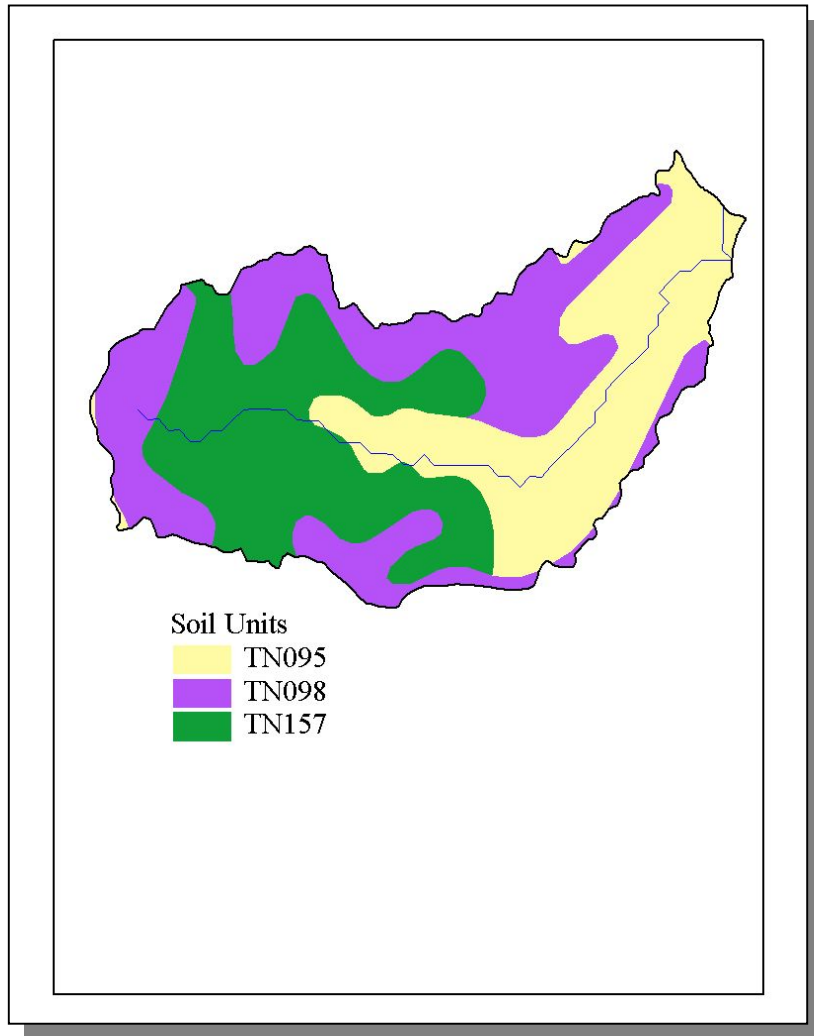


**Figure 4-30. Illustration of Land Use Distribution in Subwatershed 051301050105.**



**Figure 4-31. Land Use Distribution in Subwatershed 051301050105.** More information is provided in Appendix IV.

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**Figure 4-32. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050105.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN095	0.00	B	2.35	5.12	Loam	0.31
TN098	1.00	C	2.98	4.82	Loam	0.32
TN157	0.00	B	2.38	4.62	Loam	0.28

**Table 4-27. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050105.** The definition of "Hydrologic Group" is provided in Appendix IV.

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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Fentress	14,669	15,920	16,625	2.47	362	393	410	13.3
Overton	17,636	19,171	20,118	0.66	117	127	133	13.7
<b>Total</b>	<b>32,305</b>	<b>35,091</b>	<b>36,743</b>		<b>479</b>	<b>520</b>	<b>543</b>	<b>13.4</b>

*Table 4-28. Population Estimates in Subwatershed 051301050105.*



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**4.2.A.v.a. Point Source Contributions.**

There are no point source contributions in this subwatershed.

**4.2.A.v.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS				
Beef Cow	Cattle	Milk Cow	Chickens (Broilers Sold)	Hogs
14	31	<5	12,356	<5

**Table 4-29. Summary of Livestock Count Estimates in Subwatershed 051301050105.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Fentress	8,058	17,259	430	474	7,290,026	729	79
Overton	15,150	27,812	1,200	1,173	0	811	59

**Table 4-30. Summary of Livestock Count Estimates in Fentress and Overton Counties.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

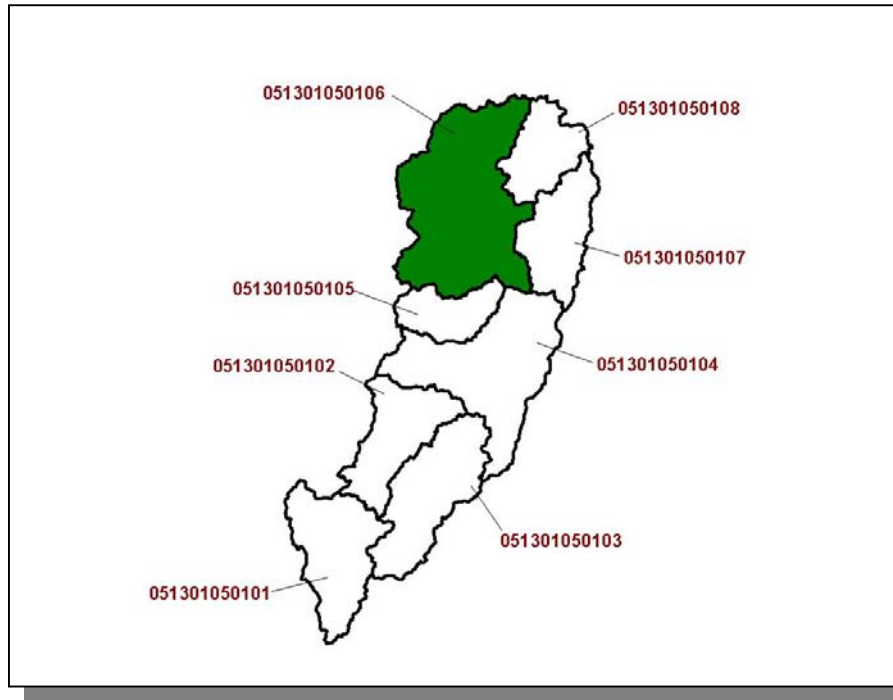
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Fentress	244.1	244.1	3.6	14.3
Overton	170.3	170.3	1.7	7.0

**Table 4-31. Forest Acreage and Annual Removal Rates (1987-1994) in Fentress and Overton Counties.**

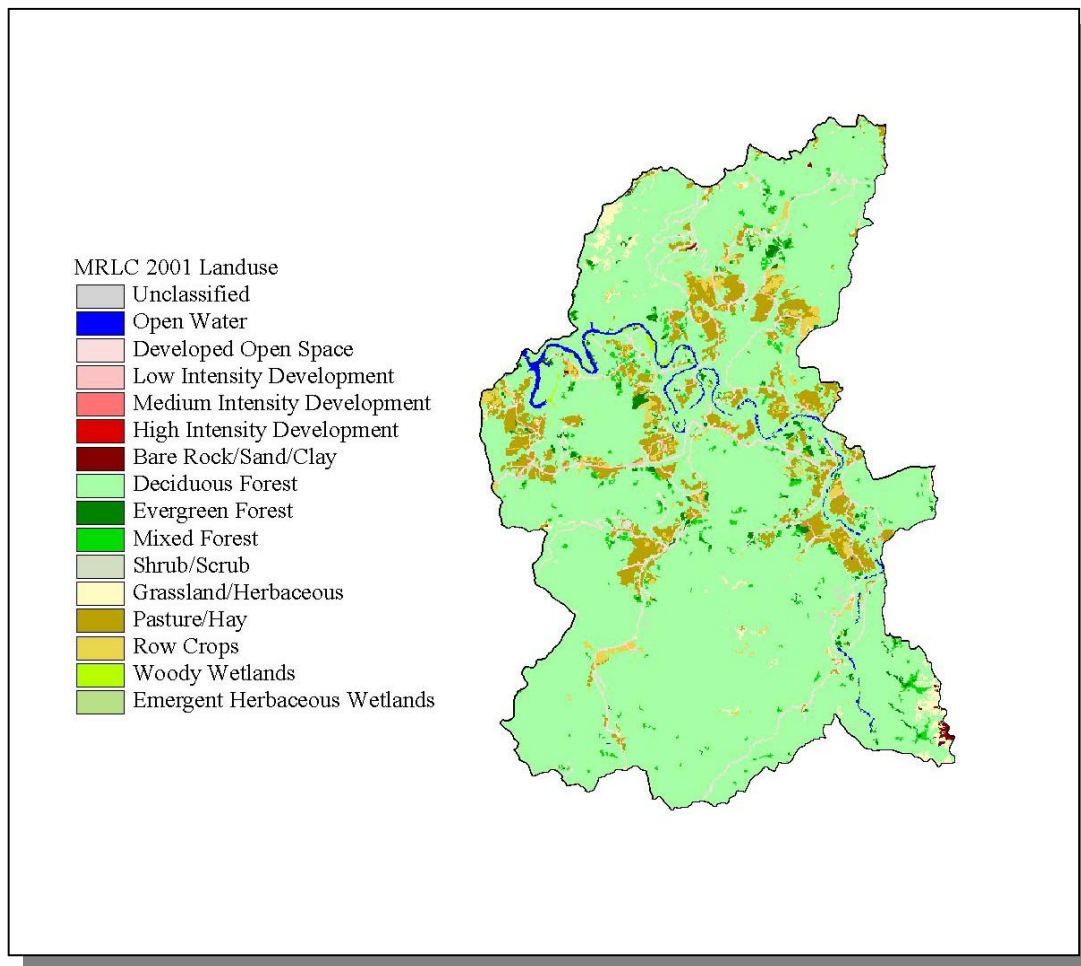
CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.63
Grass (Hayland)	0.31
Legumes, Grass (Hayland)	1.01
Forest Land (Not Grazed)	0.35
Corn (Row Crops)	13.91
Soybeans (Row Crops)	6.91
Wheat (Close-Grown Cropland)	36.43
Other Vegetable and Truck Crops	17.00
Conservation Reserve Program Lands	0.46
Farmsteads and Ranch Headquarters	0.43

**Table 4-32. Annual Estimated Total Soil Loss in Subwatershed 051301050105.**

**4.2.A.vi. 051301050106 (East Fork Obey River).**

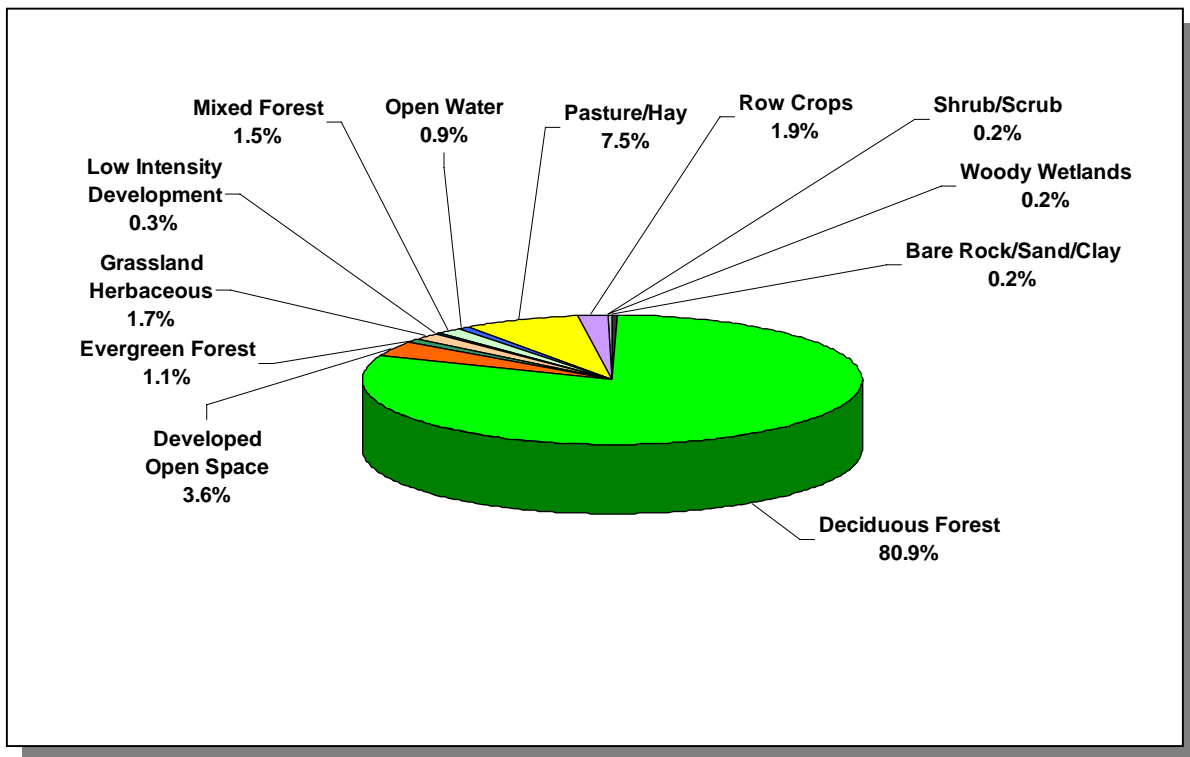


**Figure 4-33. Location of Subwatershed 051301050106.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.



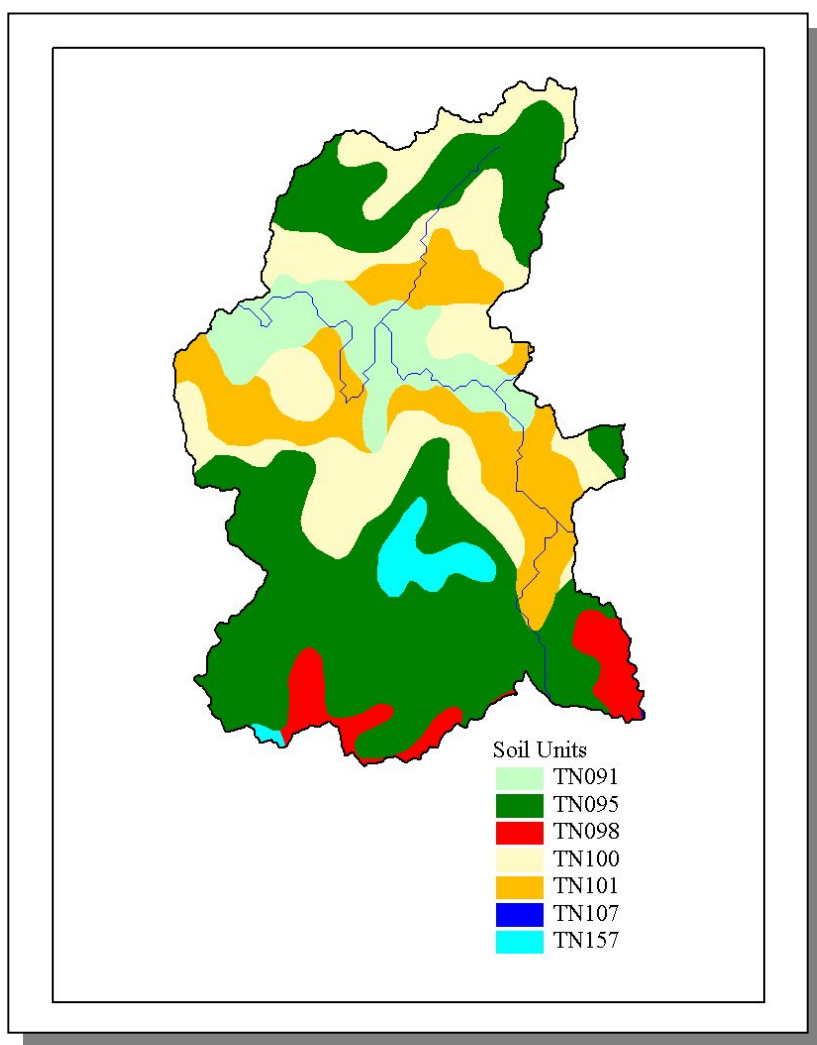
**Figure 4-34. Illustration of Land Use Distribution in Subwatershed 051301050106.**

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**Figure 4-35. Land Use Distribution in Subwatershed 051301050106.** More information is provided in Appendix IV.

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**Figure 4-36. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050106.**

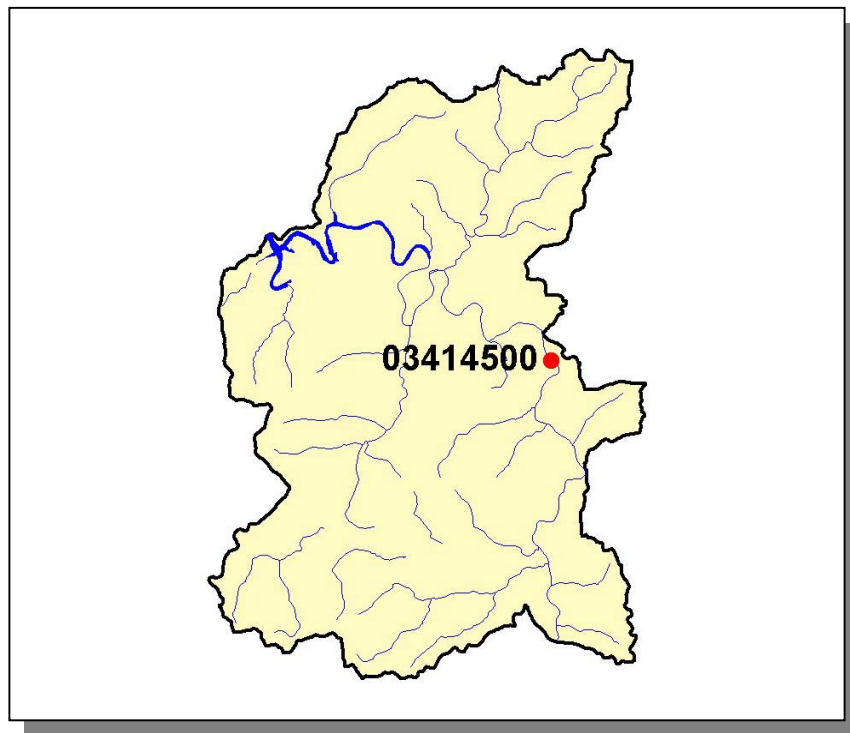
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN091	0.00	B	2.95	5.86	Loam	0.34
TN095	0.00	B	2.35	5.12	Loam	0.31
TN098	1.00	C	2.98	4.82	Loam	0.32
TN100	0.00	B	1.14	3.35	Silty Loam	0.21
TN101	0.00	B	1.71	5.39	Loam	0.35
TN107	1.00	C	6.34	4.84	Loam	0.28
TN157	0.00	B	2.38	4.62	Loam	0.28

**Table 4-33. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050106.** The definition of "Hydrologic Group" is provided in Appendix IV.

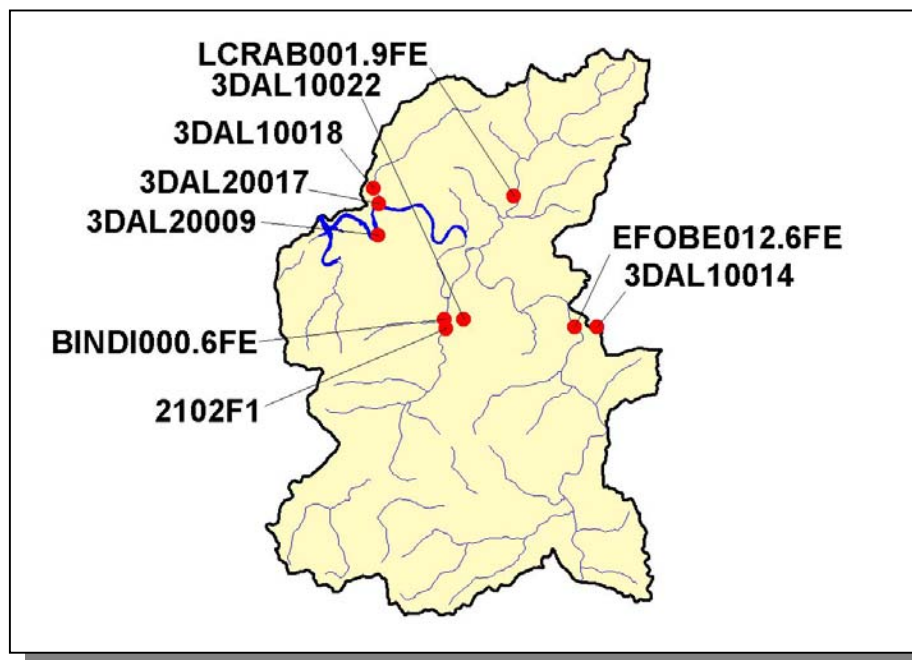
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Fentress	14,669	15,920	16,625	10.51	1,541	1,673	1,747	13.4
Overton	17,636	19,171	20,118	1.25	221	240	252	14.0
Pickett	4,548	4,631	4,945	4.35	198	201	215	8.6
<b>Total</b>	<b>36,853</b>	<b>39,722</b>	<b>41,688</b>		<b>1,960</b>	<b>2,114</b>	<b>2,214</b>	<b>13.0</b>

*Table 4-34. Population Estimates in Subwatershed 051301050106.*

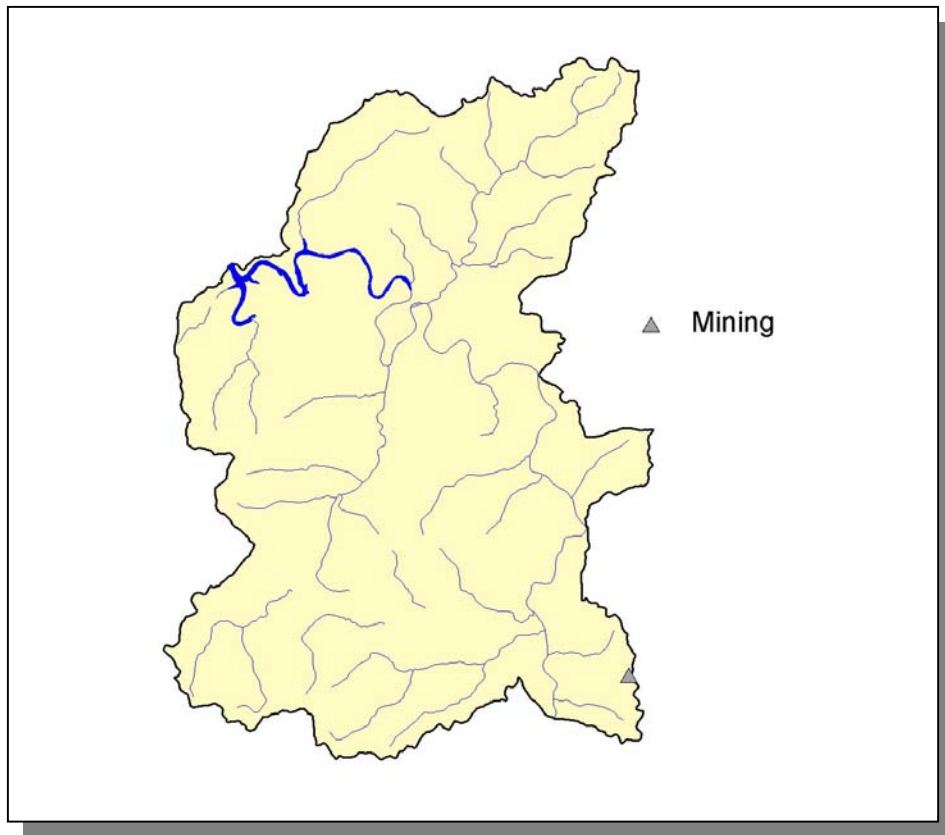


**Figure 4-37. Location of Historical Streamflow Data Collection Sites in Subwatershed 051301050106.** More information is provided in Appendix IV.



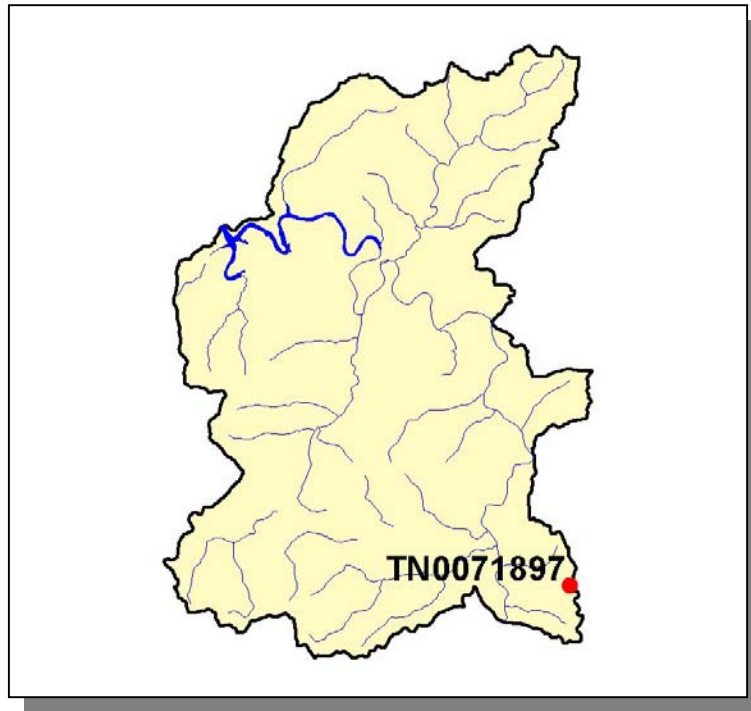
**Figure 4-38. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050106.** More information, including site names and locations, is provided in Appendix IV.

**4.2.A.vi.a. Point Source Contributions.**



**Figure 4-39. Location of Permits Issued in Subwatershed 051301050106.** More information, including the names of facilities, is provided in Appendix IV.





**Figure 4-40. Location of Active Mining Sites in Subwatershed 051301050106.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.A.vi.b. Nonpoint Source Contributions.**

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
692	1,430	29	<5	478,206	51	5

**Table 4-35. Summary of Livestock Count Estimates in Subwatershed 0604000401.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

<b>LIVESTOCK COUNTS</b>							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Fentress	8,058	17,259	430	474	7,290,026	729	79
Overton	15,150	27,812	1,200	1,173	0	811	59
Pickett	5,986	10,864	19	285	0	99	0

**Table 4-36. Summary of Livestock Count Estimates in Fentress, Overton, and Pickett Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

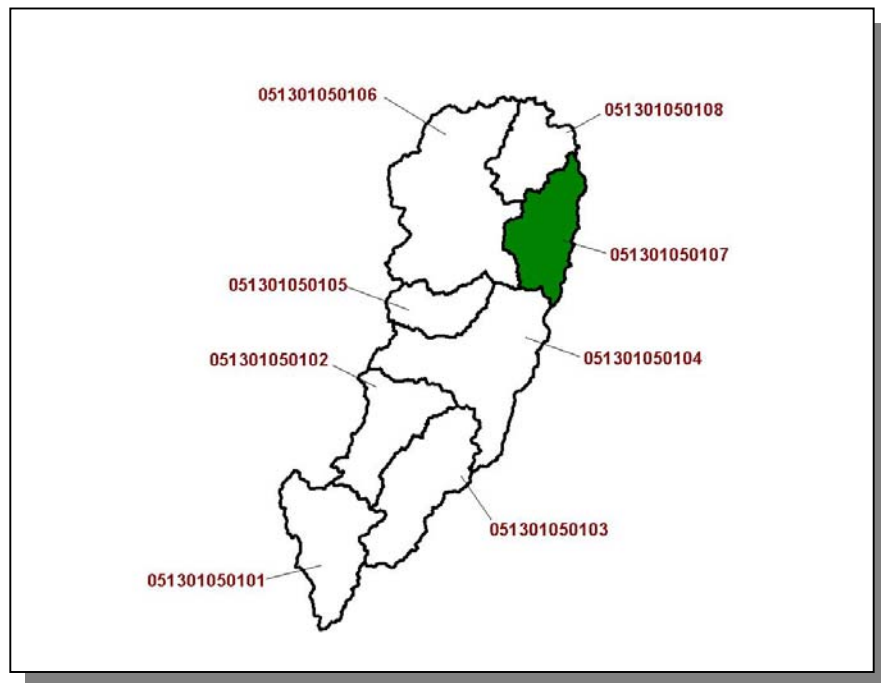
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Fentress	244.1	244.1	3.6	14.3
Overton	170.3	170.3	1.7	7.0
Pickett	68.4	68.4	0.2	0.6

**Table 4-37. Forest Acreage and Annual Removal Rates (1987-1994) in Fentress, Overton, and Pickett Counties.**

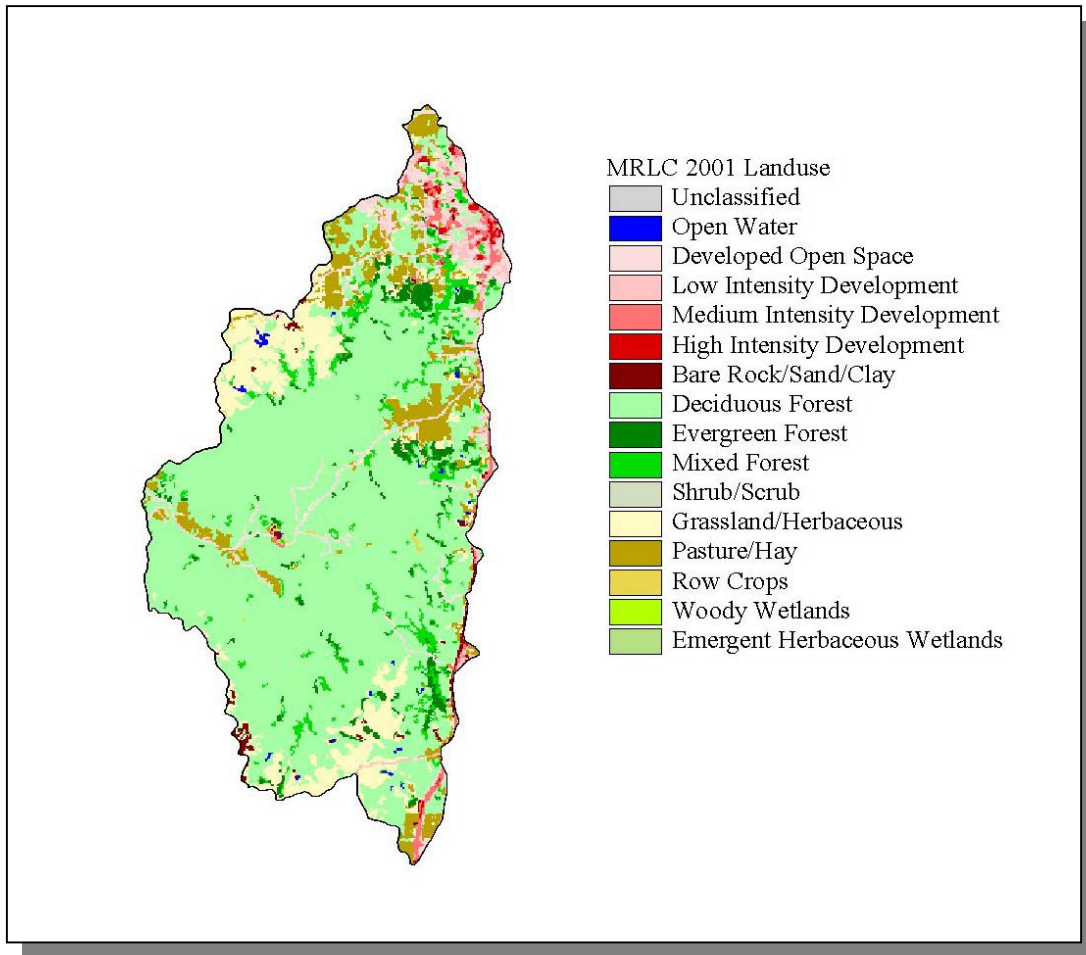
<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Grass (Pastureland)	0.73
Grass (Hayland)	0.19
Legumes, Grass (Hayland)	0.69
Grass, Forbs, Legumes (Mixed Pasture)	0.36
Corn (Row Crops)	15.06
Soybeans (Row Crops)	6.45
Tobacco (Row Crops)	23.18
Wheat (Close-Grown Cropland)	39.95
Other Vegetable and Truck Crops	16.47
Conservation Reserve Program Lands	0.46
Farmsteads and Ranch Headquarters	1.28

**Table 4-38. Annual Estimated Total Soil Loss in Subwatershed 051301050106.**

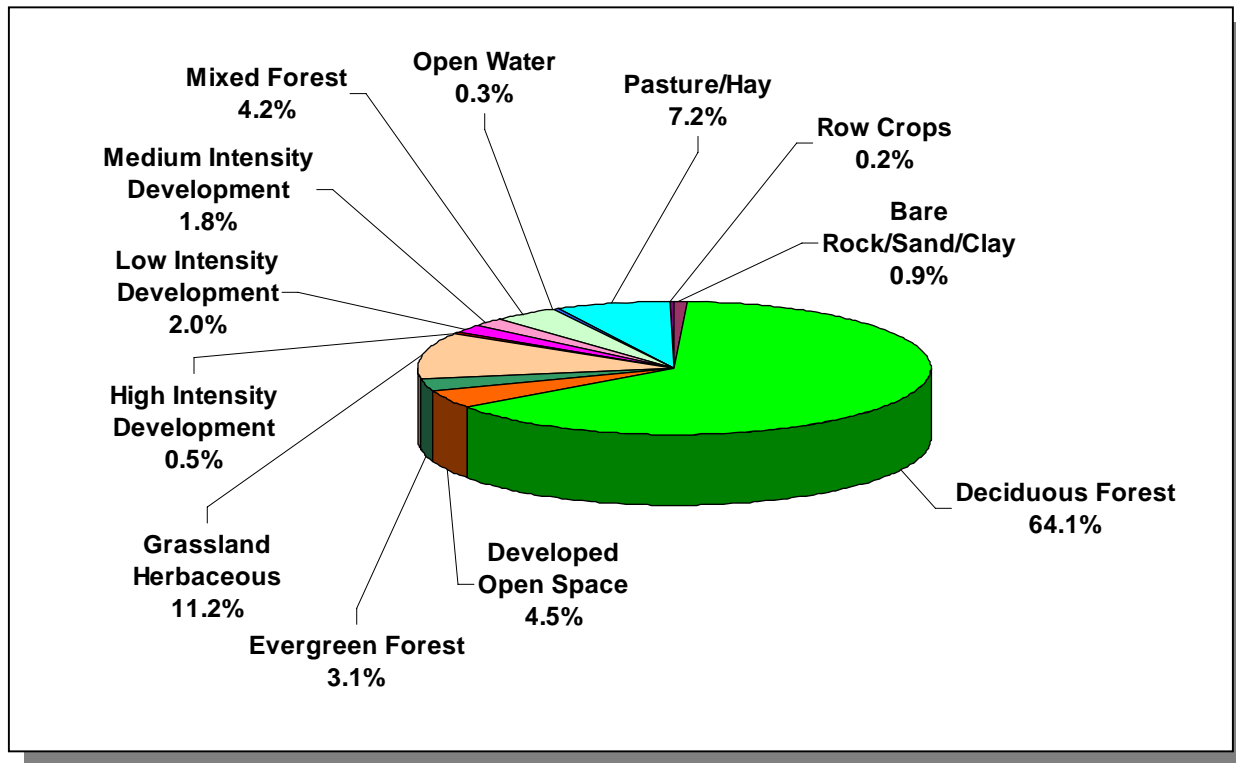
**4.2.A.vii. 051301050107 (Rockcastle Creek).**



**Figure 4-41. Location of Subwatershed 051301050107.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.

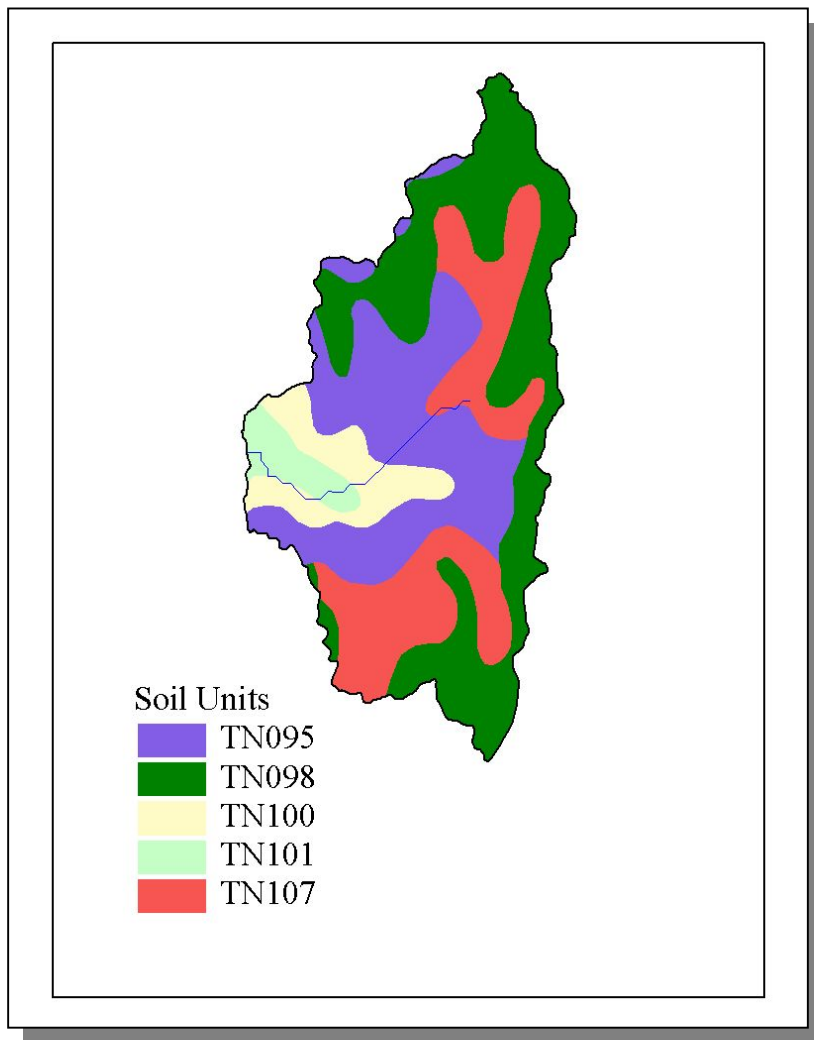


**Figure 4-42. Illustration of Land Use Distribution in Subwatershed 051301050107.**



**Figure 4-43. Land Use Distribution in Subwatershed 051301050107.** More information is provided in Appendix IV.

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**Figure 4-44. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050107.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN091	0.00	B	2.95	5.86	Loam	0.34
TN095	0.00	B	2.35	5.12	Loam	0.31
TN098	1.00	C	2.98	4.82	Loam	0.32
TN100	0.00	B	1.14	3.35	Silty Loam	0.21
TN101	0.00	B	1.71	5.39	Loam	0.35
TN107	1.00	C	6.34	4.84	Loam	0.28
TN157	0.00	B	2.38	4.62	Loam	0.28

**Table 4-39. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050107.** The definition of "Hydrologic Group" is provided in Appendix IV.

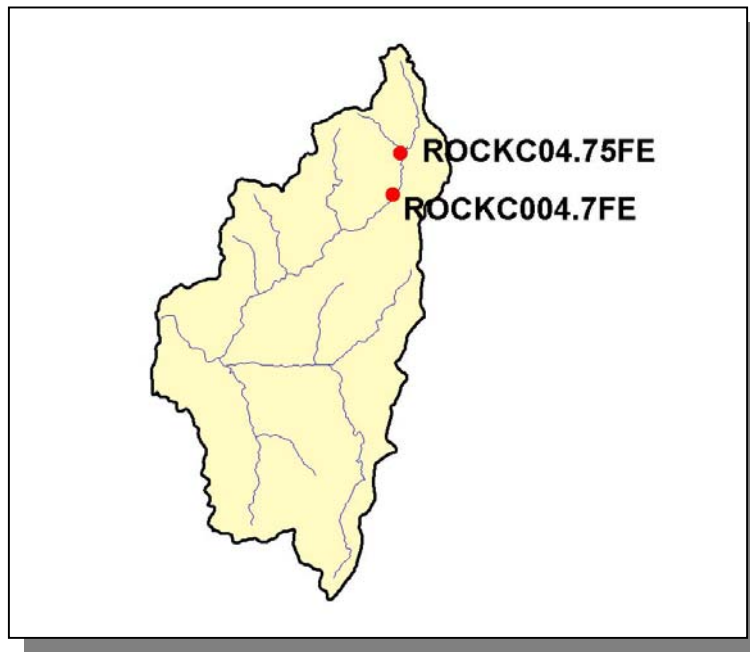
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Fentress	14,669	15,920	16,625	4.87	714	775	809	13.3

**Table 4-40. Population Estimates in Subwatershed 051301050107.**

Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Jamestown	Fentress	1,862	904	635	243	26

**Table 4-41. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051301050107.**



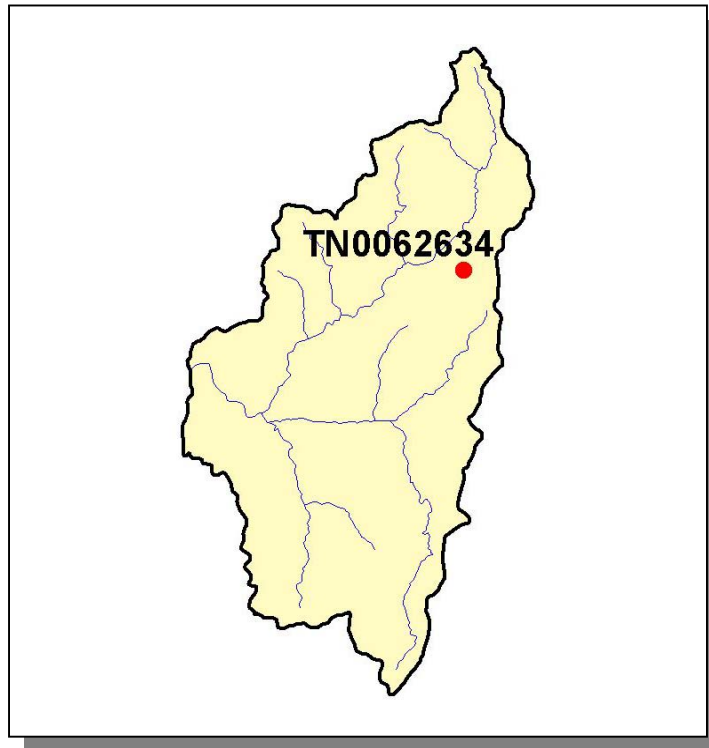
**Figure 4-45. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050107. More information, including site names and locations, is provided in Appendix IV.**

**4.2.A.vii.a. Point Source Contributions.**

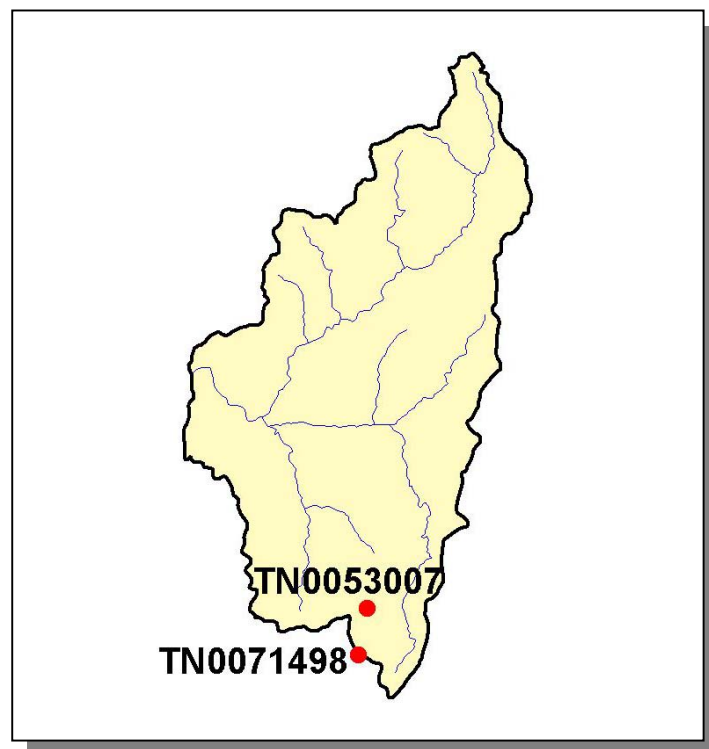


**Figure 4-46. Location of Permits Issued in Subwatershed 051301050107.** More information, including the names of facilities, is provided in Appendix IV.





**Figure 4-47. Location of Active NPDES Sites in Subwatershed 051301050107.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-48. Location of Active Mining Sites in Subwatershed 051301050107.** More information, including the names of mining operations, is provided in Appendix IV.



**Figure 4-49. Location of Concentrated Animal Feeding Operation (CAFO) in Subwatershed 051301050107.** More information, including the names of facilities, is provided in Appendix IV.

**4.2.A.vii.a.i. Dischargers to Water Bodies Listed on the 2004 303(d) List**

There is one NPDES facility discharging to water bodies listed on the 2004 303(d) list in Subwatershed 051301050107:

- TN0062634 (Jamestown STP) discharges to Rockcastle Creek @ RM 4.75



**Figure 4-50. Location of NPDES Dischargers to Water Bodies Listed on the 2004 303(d) List in Subwatershed 051301050107.** More information, including the names of facilities, is provided in Appendix IV.

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PERMIT #	1Q10	3Q10	7Q10	3Q20	QDESIGN
TN0062634			0		

**Table 4-42. Receiving Stream Flow Information for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051301050107.** Data are in million gallons per day (MGD). Data were obtained from the USGS publication Flow Duration and Low Flows of Tennessee Streams Through 1992 or from permit files.

PERMIT #	P	NO <sub>3</sub> +NO <sub>2</sub>	FLOW
TN0062634	X	X	X

**Table 4-43. Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051301050107.**

PERMIT #	WET	CBOD <sub>5</sub>	NH <sub>3</sub>	Hg	TRC	TSS	SETTLEABLE SOLIDS	DO	pH
TN0062634	X	X	X	X	X	X	X	X	X

**Table 4-44. Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051301050107.** WET, Whole Effluent Toxicity; CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen Demand (5-Day); TRC, Total Residual Chlorine; TSS, Total Suspended Solids.

PERMIT #	E. coli	FECAL COLIFORM
TN0062634	X	X

**Table 4-45. Bacteria Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051301050107.**

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**4.2.A.vii.b. Nonpoint Source Contributions.**

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
336	720	18	<5	303,939	30	<5

**Table 4-46. Summary of Livestock Count Estimates in Subwatershed 051301050107.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

<b>LIVESTOCK COUNTS</b>							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Fentress	8,058	17,259	430	474	7,290,026	729	79

**Table 4-47. Summary of Livestock Count Estimates in Fentress County.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

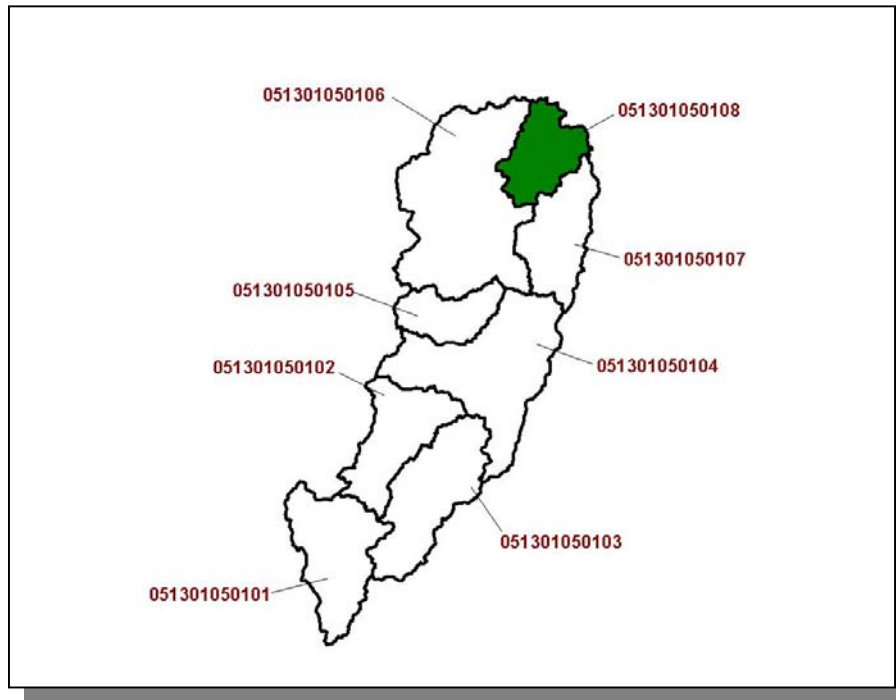
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Fentress	244.1	244.1	3.6	14.3

**Table 4-48. Forest Acreage and Annual Removal Rates (1987-1994) in Fentress County.**

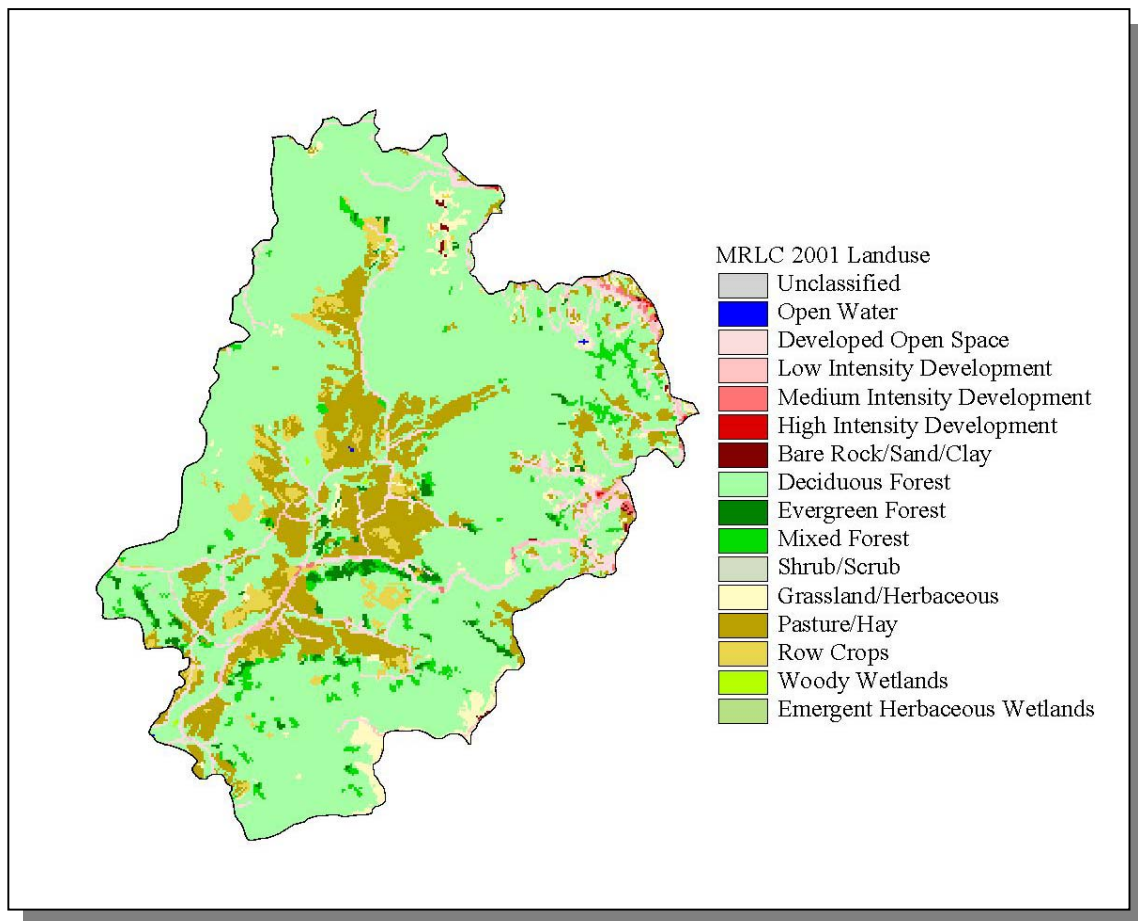
<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Grass (Pastureland)	0.72
Legumes, Grass (Hayland)	0.56
Grass, Forbs, Legumes (Mixed Pasture)	0.27
Corn (Row Crops)	16.18
Soybeans (Row Crops)	6.00
Wheat (Close-Grown Cropland)	43.40
Other Vegetable and Truck Crops	15.94
Farmsteads and Ranch Headquarters	0.40

**Table 4-49. Annual Estimated Total Soil Loss in Subwatershed 051301050107.**

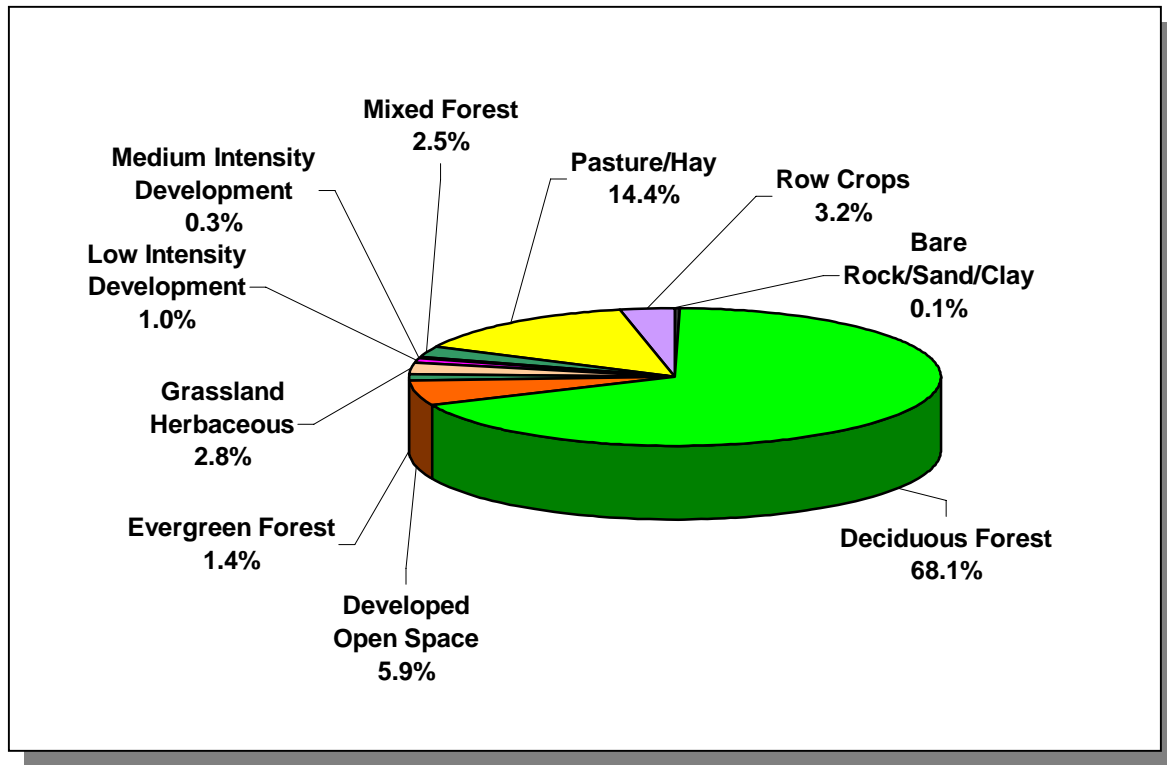
**4.2.A.viii. 051301050108 (Poplar Creek).**



**Figure 4-51. Location of Subwatershed 051301050108.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.



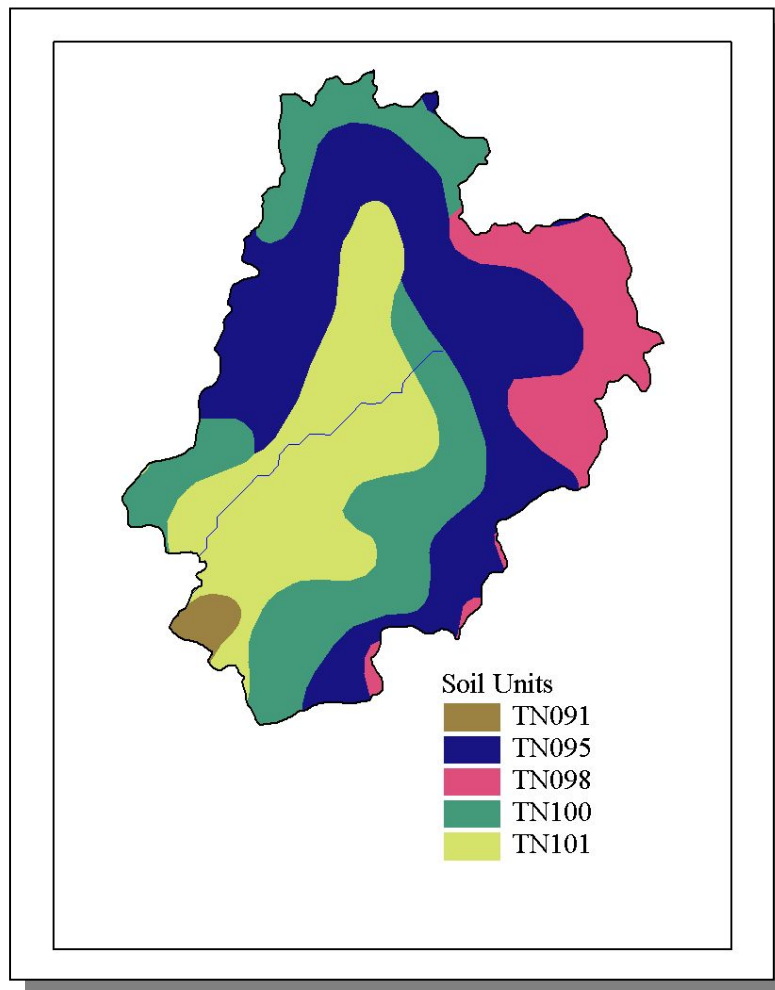
**Figure 4-52. Illustration of Land Use Distribution in Subwatershed 051301050108.**



*Figure 4-53. Land Use Distribution in Subwatershed 051301050108. More information is provided in Appendix IV.*



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**Figure 4-54. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050108.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN091	0.00	B	2.95	5.86	Loam	0.34
TN095	0.00	B	2.35	5.12	Loam	0.31
TN098	1.00	C	2.98	4.82	Loam	0.32
TN100	0.00	B	1.14	3.35	Silty Loam	0.21
TN101	0.00	B	1.71	5.39	Loam	0.35

**Table 4-50. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050108.** The definition of "Hydrologic Group" is provided in Appendix IV.

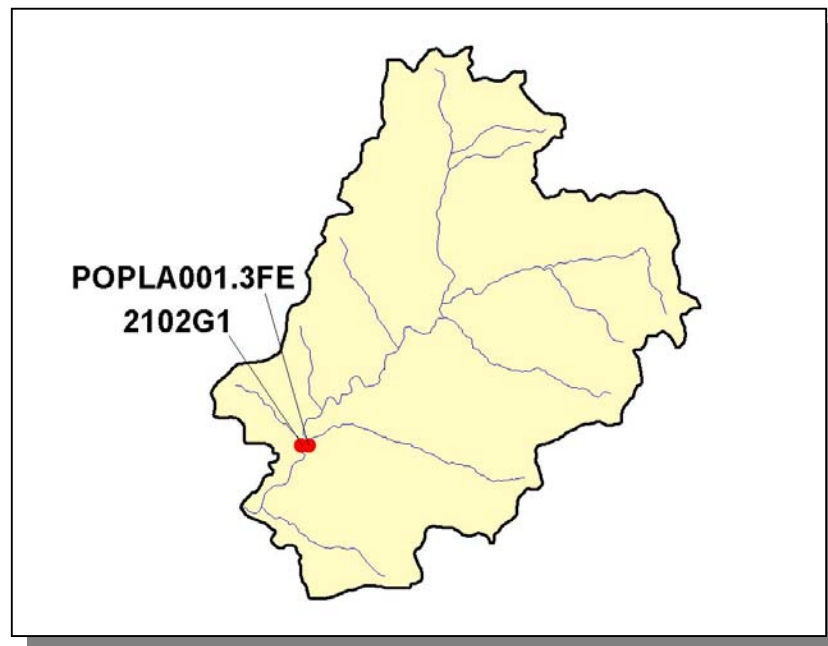
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Fentress	14,669	15,920	16,625	3.82	560	608	635	13.4

**Table 4-51. Population Estimates in Subwatershed 051301050108.**

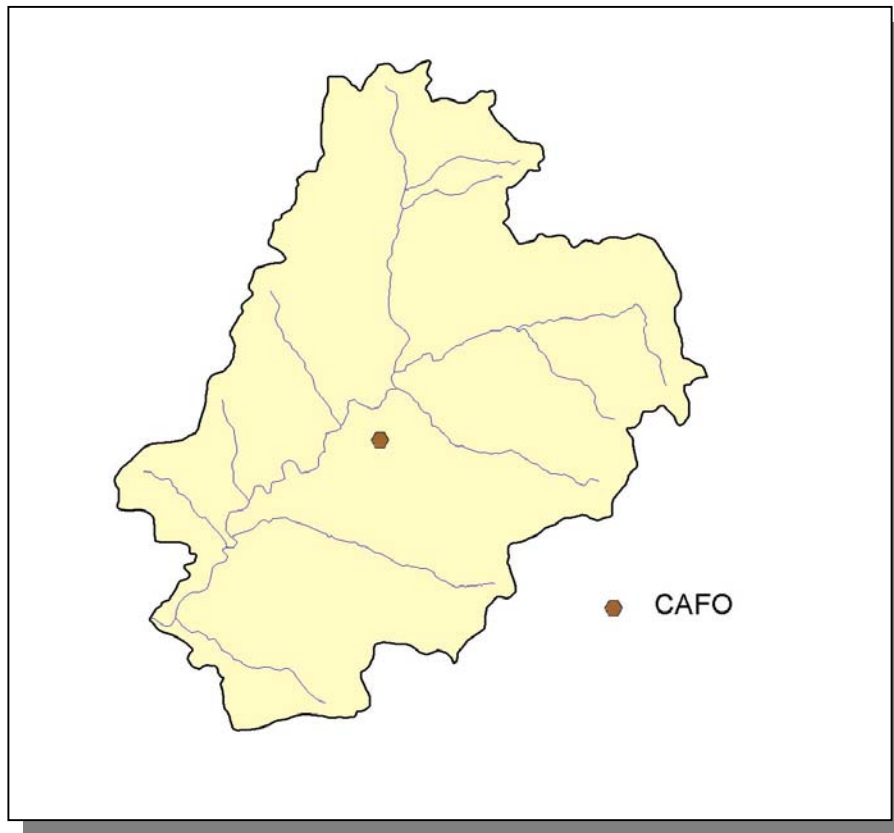
Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Jamestown	Fentress	1,862	904	635	243	26

**Table 4-52. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051301050108.**



**Figure 4-55. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050108. More information, including site names and locations, is provided in Appendix IV.**

**4.2.A.viii.a. Point Source Contributions.**



**Figure 4-56. Location of Permits Issued in Subwatershed 051301050108.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-57. Location of Concentrated Animal Feeding Operation (CAFO) in Subwatershed 051301050108.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.A.viii.b. Nonpoint Source Contributions.**

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
435	933	23	<5	393,904	39	<5

**Table 4-53. Summary of Livestock Count Estimates in Subwatershed 051301050108.**

According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

<b>LIVESTOCK COUNTS</b>							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Fentress	8,058	17,259	430	474	7,290,026	729	79

**Table 4-54. Summary of Livestock Count Estimates in Fentress County.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

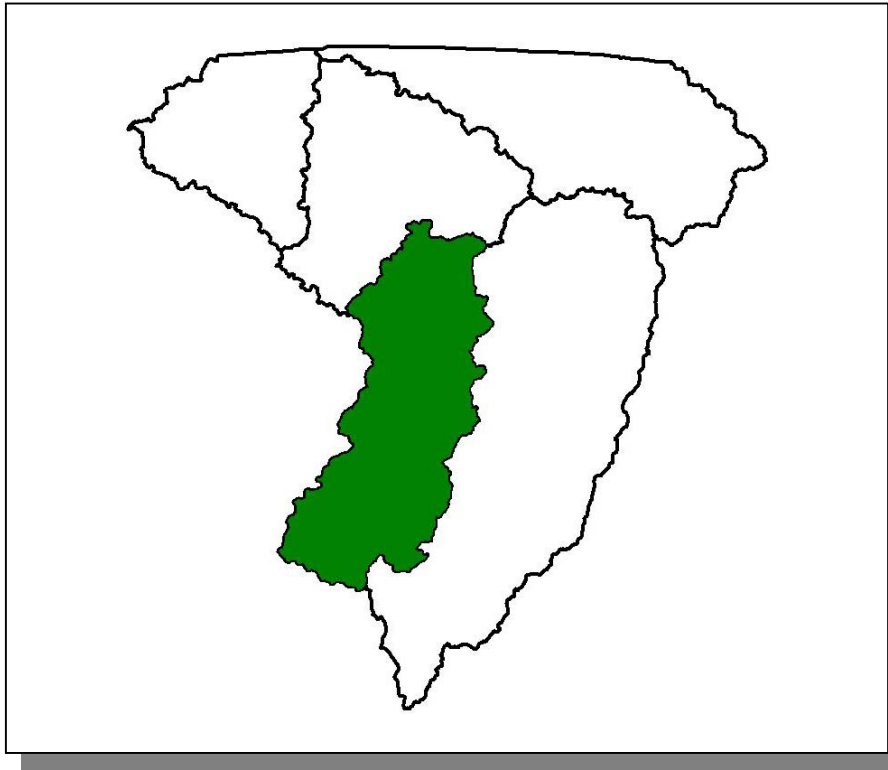
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Fentress	244.1	244.1	3.6	14.3

**Table 4-55. Forest Acreage and Annual Removal Rates (1987-1994) in Fentress County.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Grass (Pastureland)	0.72
Legumes, Grass (Hayland)	0.56
Grass, Forbs, Legumes (Mixed Pasture)	0.27
Corn (Row Crops)	16.18
Soybeans (Row Crops)	6.00
Wheat (Close-Grown Cropland)	43.40
Other Vegetable and Truck Crops	15.94
Farmsteads and Ranch Headquarters	0.40

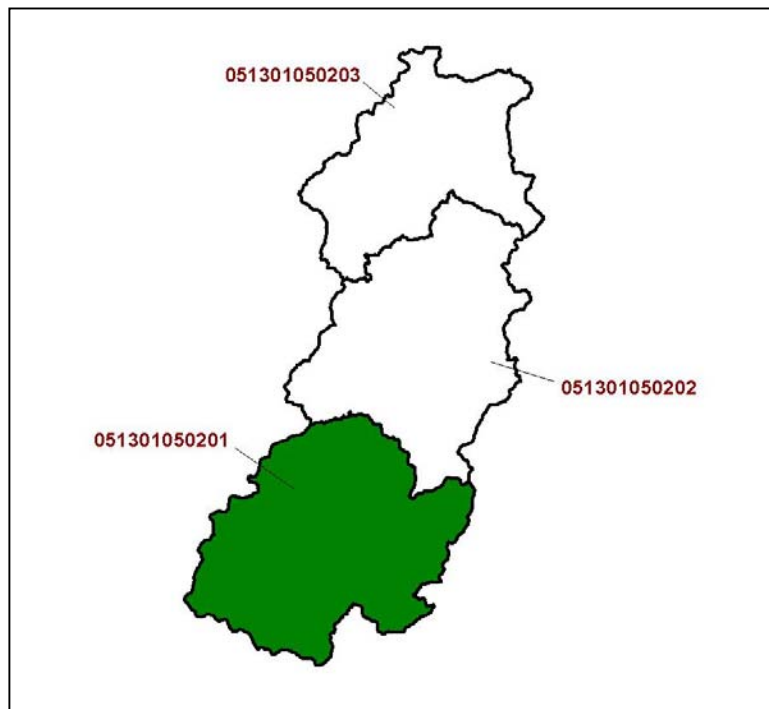
**Table 4-56. Annual Estimated Total Soil Loss in Subwatershed 051301050108.**

**4.2.B. 0513010502.**

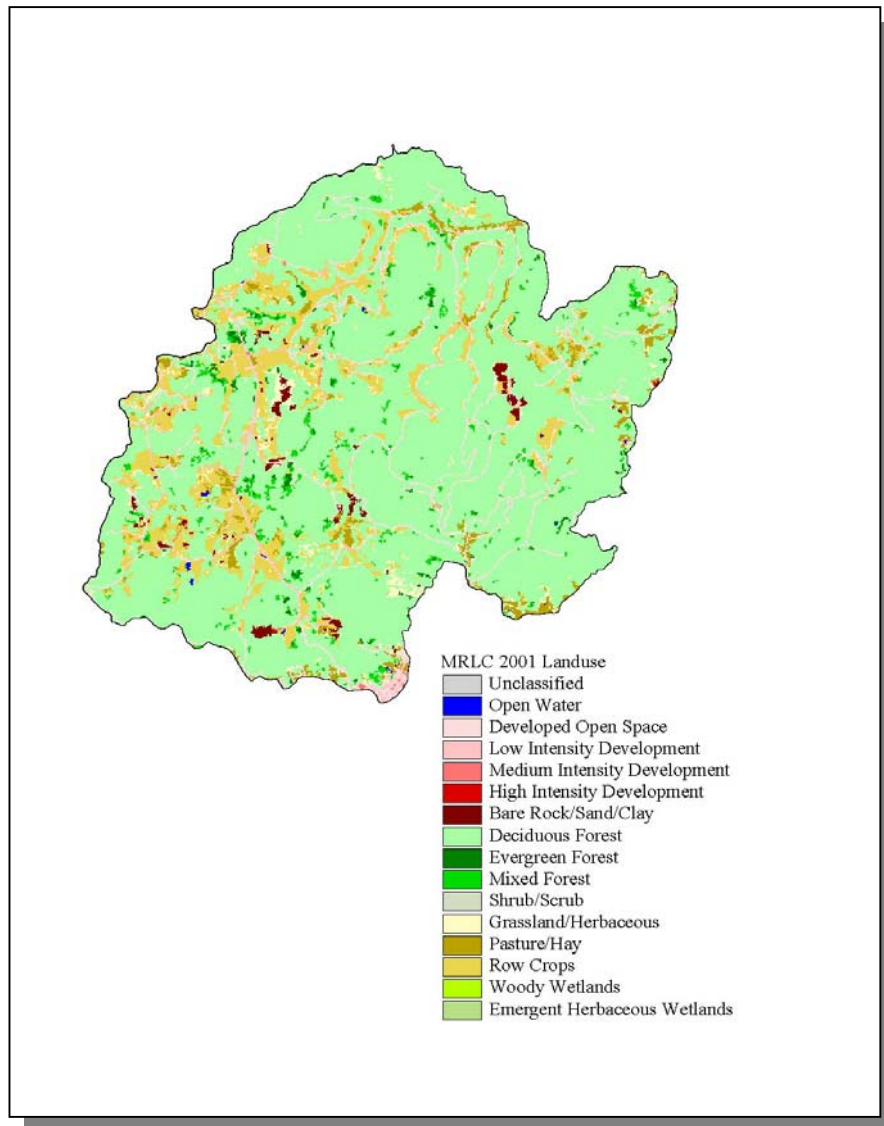


**Figure 4-58. Location of Subwatershed 0513010502.** All Obey River HUC-10 subwatershed boundaries in Tennessee are shown for reference.

**4.2.B.i. 051301050201 (West Fork Obey River).**

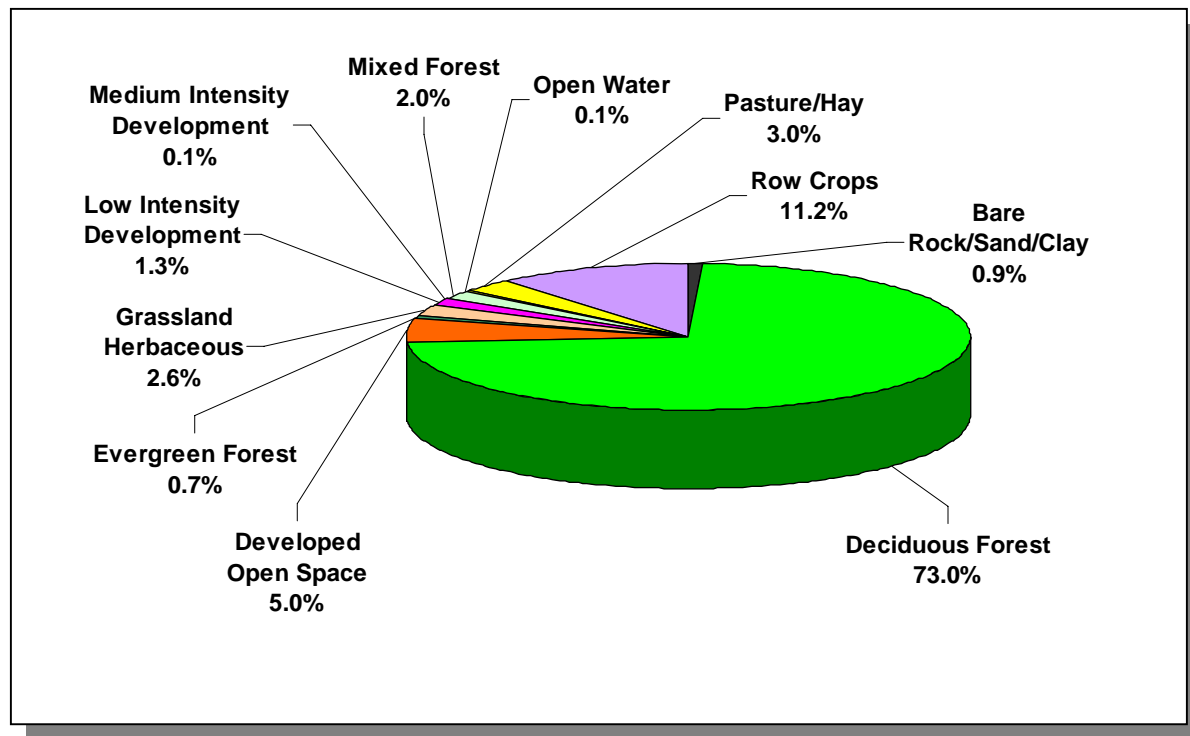


**Figure 4-59. Location of Subwatershed 051301050201.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.

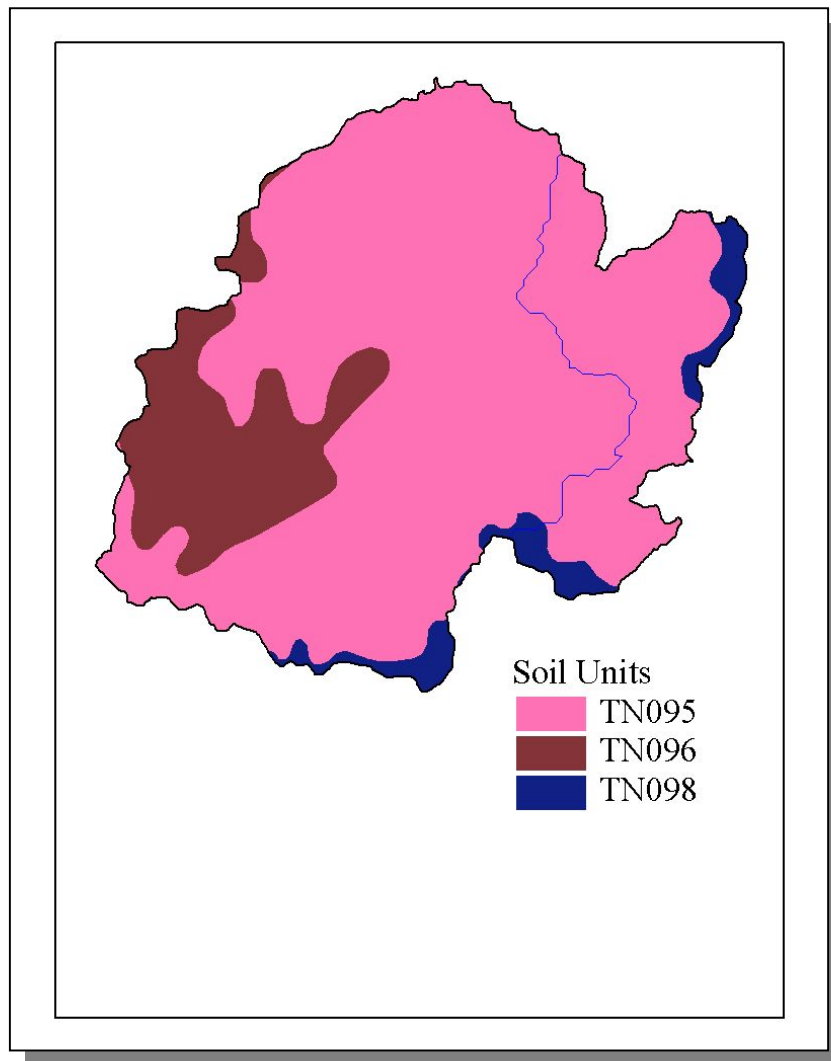


**Figure 4-60. Illustration of Land Use Distribution in Subwatershed 051301050201.**





**Figure 4-61. Land Use Distribution in Subwatershed 051301050201.** More information is provided in Appendix IV.



**Figure 4-62. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050201.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN095	0.00	B	2.35	5.12	Loam	0.31
TN096	10.00	C	1.22	5.16	Silty Loam	0.38
TN098	1.00	C	2.98	4.82	Loam	0.32

**Table 4-57. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050201.** The definition of "Hydrologic Group" is provided in Appendix IV.

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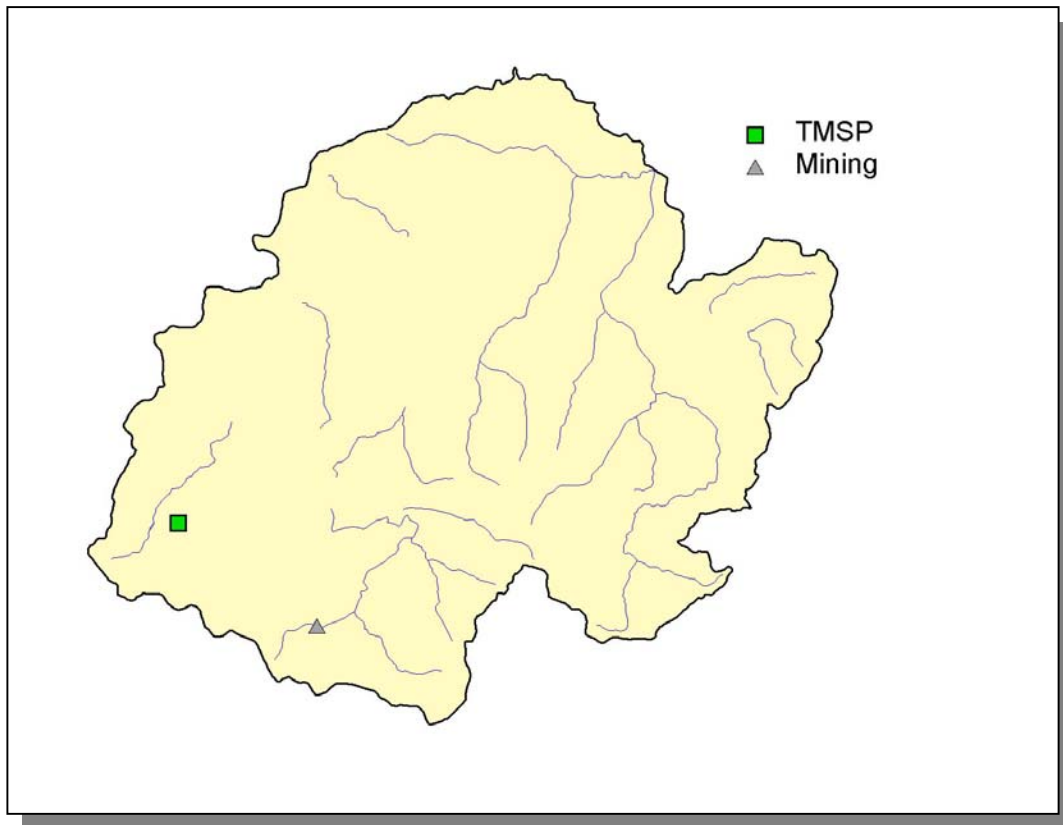
County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Overton	17,636	19,171	20,118	10.14	1,789	1,945	2,041	14.1
Putnam	51,373	58,326	62,315	3.41	1,753	1,990	2,127	21.3
<b>Total</b>	<b>69,009</b>	<b>77,497</b>	<b>82,433</b>		<b>3,542</b>	<b>3,935</b>	<b>4,168</b>	<b>17.7</b>

*Table 4-58. Population Estimates in Subwatershed 051301050201.*

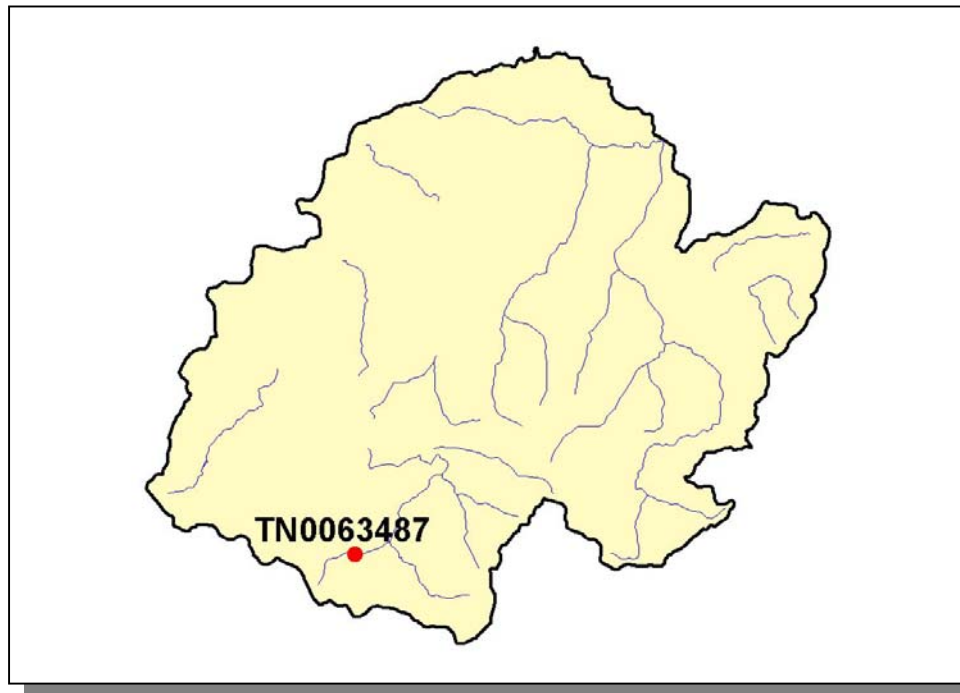
			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Monterey	Putnam	2,559	1,113	875	228	10

*Table 4-59. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051301050201.*

**4.2.B.i.a. Point Source Contributions.**



**Figure 4-63. Location of Permits Issued in Subwatershed 051301050201.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-64. Location of Active Mining Sites in Subwatershed 051301050201.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-65. Location of TMSP Sites in Subwatershed 051301050201.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.B.i.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
859	1,613	70	<5	54	<5

**Table 4-60. Summary of Livestock Count Estimates in Subwatershed 051301050201.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Overton	15,150	27,812	1,200	1,173	811	59
Putnam	12,592	24,817	1,095	1,025	1,070	66

**Table 4-61. Summary of Livestock Count Estimates in Overton and Putnam Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

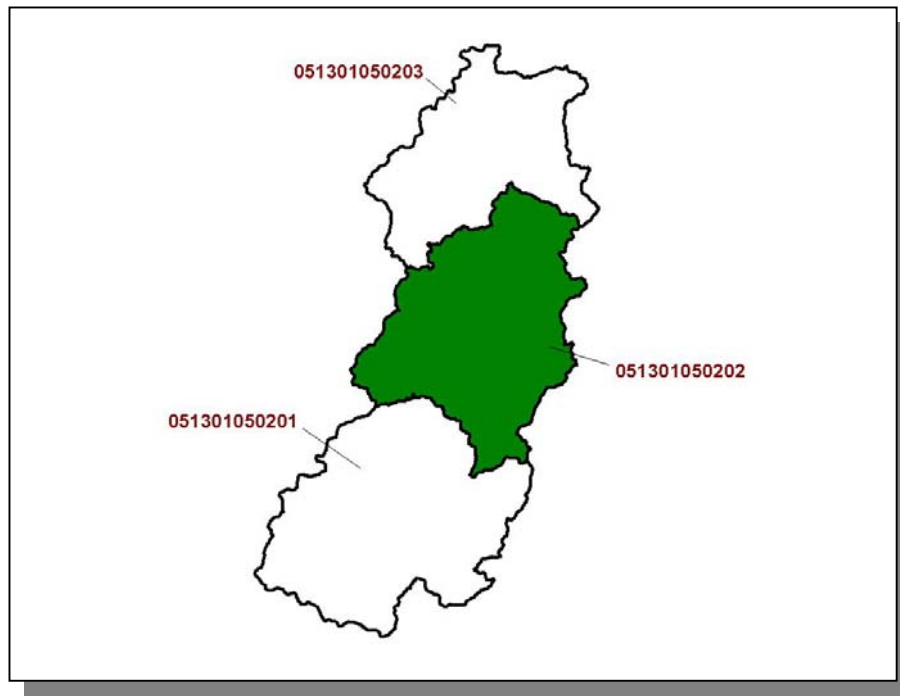
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Overton	170.3	170.3	1.7	7.0
Putnam	152.5	152.3	3.6	16.4

**Table 4-62. Forest Acreage and Annual Removal Rates (1987-1994) in Overton and Putnam Counties.**

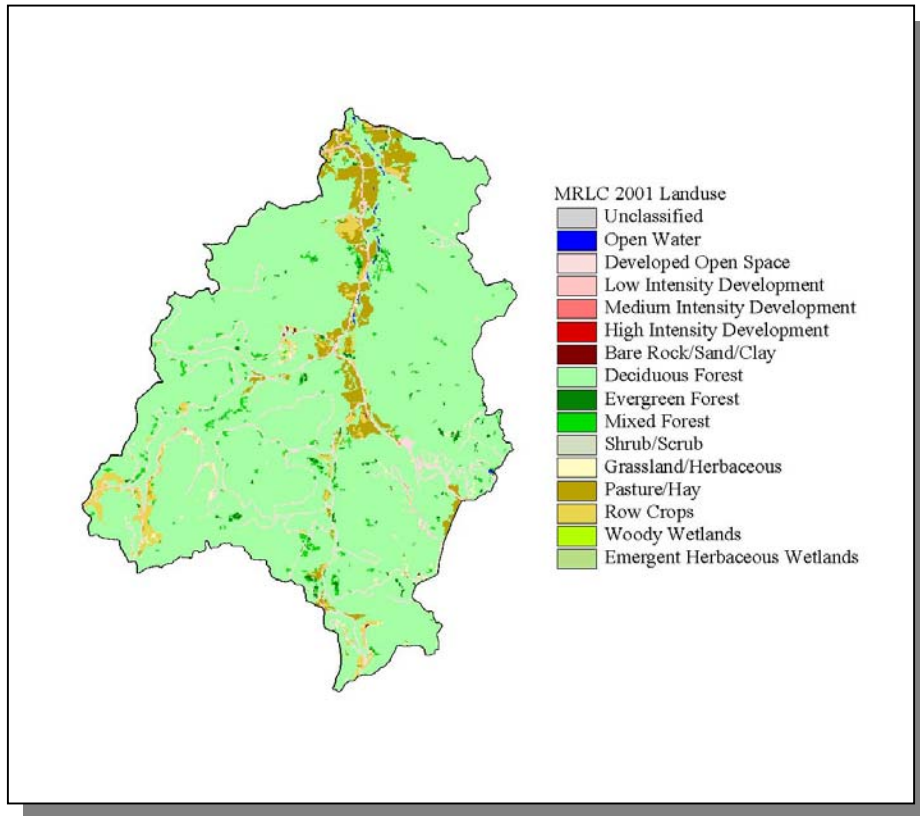
CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.65
Grass (Hayland)	0.62
Legumes, Grass (Hayland)	2.35
Legumes (Hayland)	0.23
Grass, Forbs, Legumes (Mixed Pasture)	0.74
Corn (Row Crops)	4.35
Soybeans (Row Crops)	10.79
Tobacco (Row Crops)	12.38
Wheat (Close-Grown Cropland)	7.00
Other Vegetable and Truck Crops	19.82
Conservation Reserve Program Lands	0.46
Farmsteads and Ranch Headquarters	0.50

**Table 4-63. Annual Estimated Total Soil Loss in Subwatershed 051301050201.**

**4.2.B.ii.** 051301050202 (West Fork Obey River).

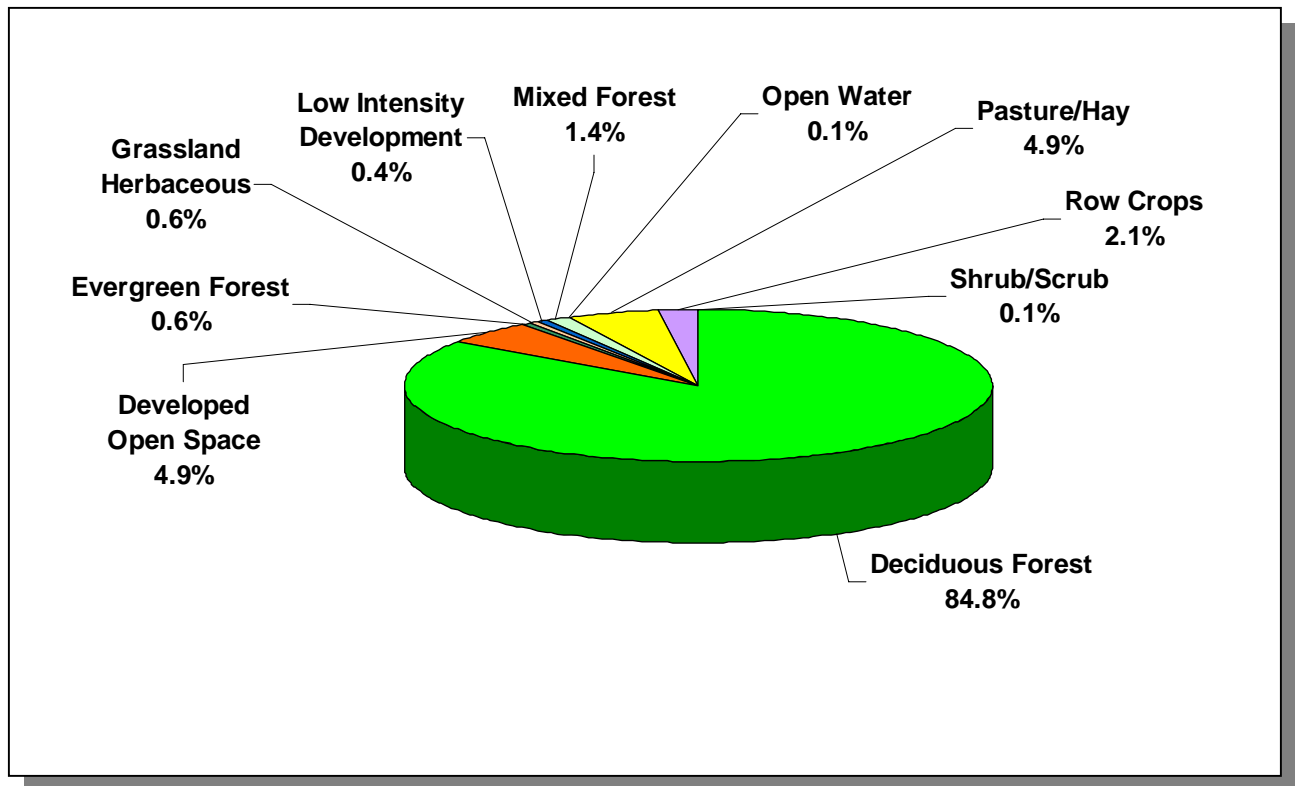


**Figure 4-66. Location of Subwatershed 051301050202.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.



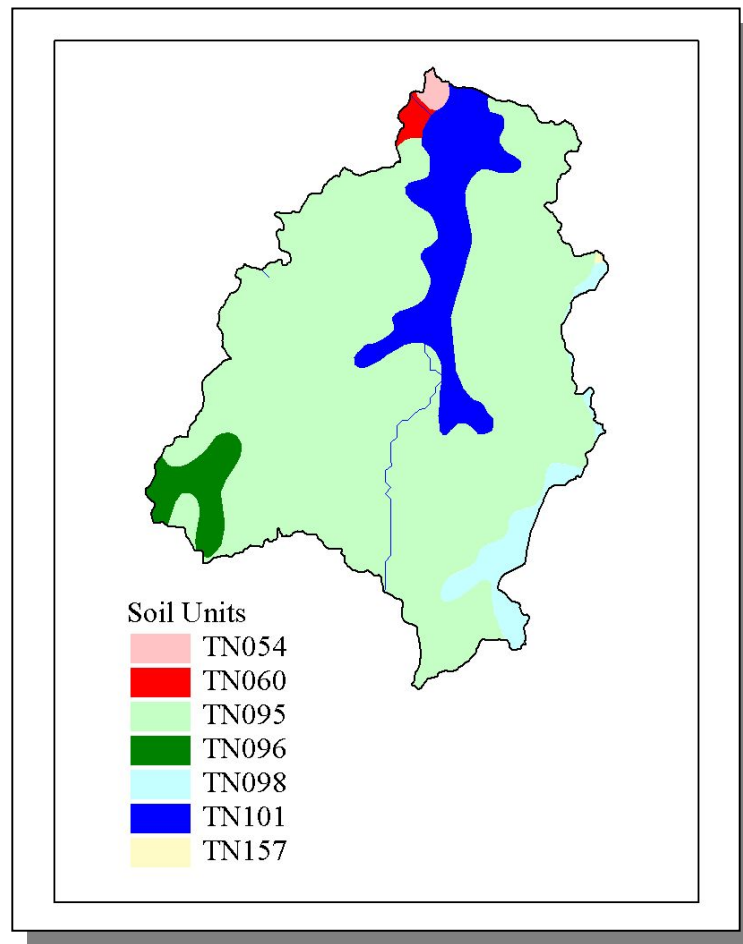
**Figure 4-67. Illustration of Land Use Distribution in Subwatershed 051301050202.**





**Figure 4-68. Land Use Distribution in Subwatershed 051301050202.** More information is provided in Appendix IV.

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**Figure 4-69. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050202.**

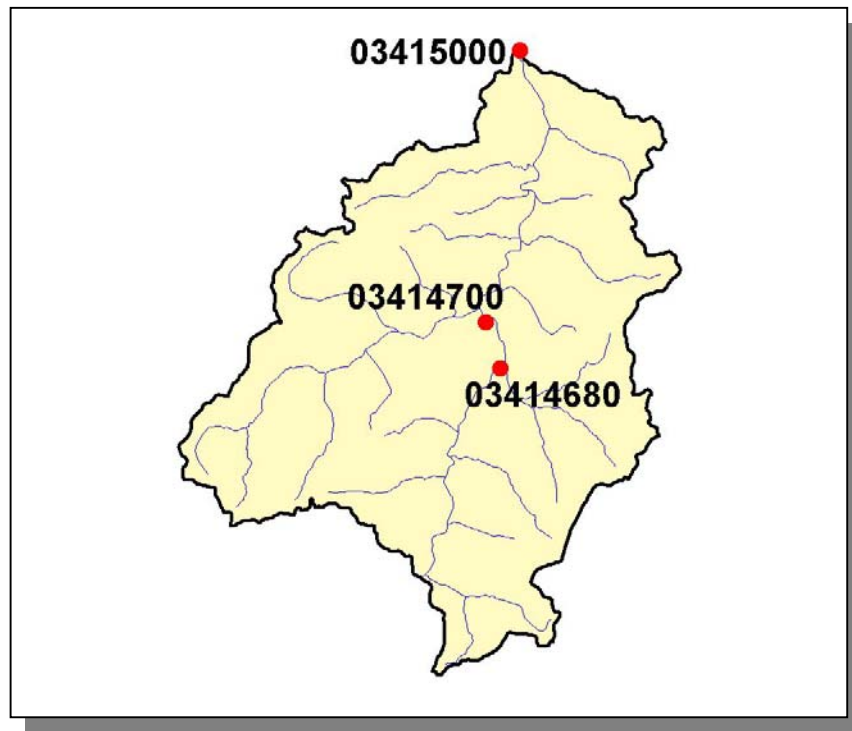
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN060	5.00	B	1.30	5.32	Silty Loam	0.39
TN095	0.00	B	2.35	5.12	Loam	0.31
TN096	10.00	C	1.22	5.16	Silty Loam	0.38
TN098	1.00	C	2.98	4.82	Loam	0.32
TN101	0.00	B	1.71	5.39	Loam	0.35
TN157	0.00	B	2.38	4.62	Loam	0.28

**Table 4-64. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050202.** The definition of "Hydrologic Group" is provided in Appendix IV.

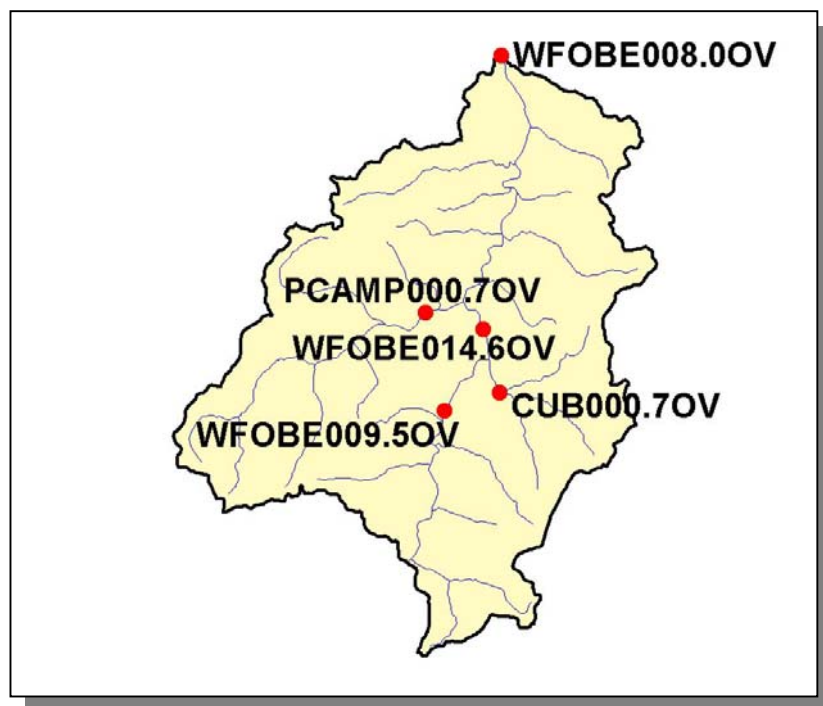
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Overton	17,636	19,171	20,118	12.23	2,157	2,345	2,461	14.1

***Table 4-65. Population Estimates in Subwatershed 051301050202.***



**Figure 4-70. Location of Historical Streamflow Data Collection Sites in Subwatershed 051301050202.** More information is provided in Appendix IV.



**Figure 4-71. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050202.** More information, including site names and locations, is provided in Appendix IV.

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**4.2.B.ii.a. Point Source Contributions.**

There are no point source contributions in this subwatershed.

**4.2.B.ii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
442	811	35	<5	24	<5

**Table 4-66. Summary of Livestock Count Estimates in Subwatershed 051301050202.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Overton	15,150	27,812	1,200	1,173	0	811	59

**Table 4-67. Summary of Livestock Count Estimates in Overton County.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

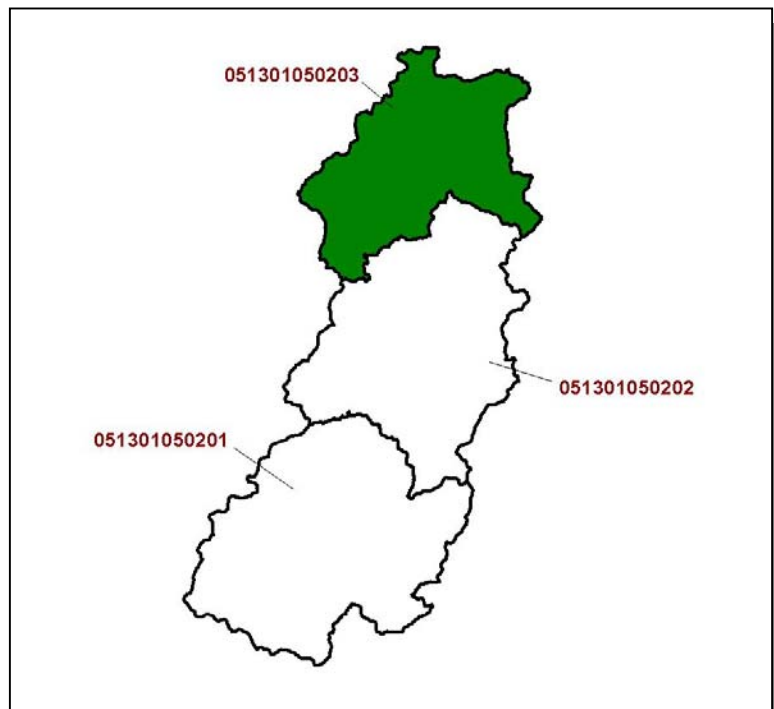
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Overton	170.3	170.3	1.7	7.0

**Table 4-68. Forest Acreage and Annual Removal Rates (1987-1994) in Overton County.**

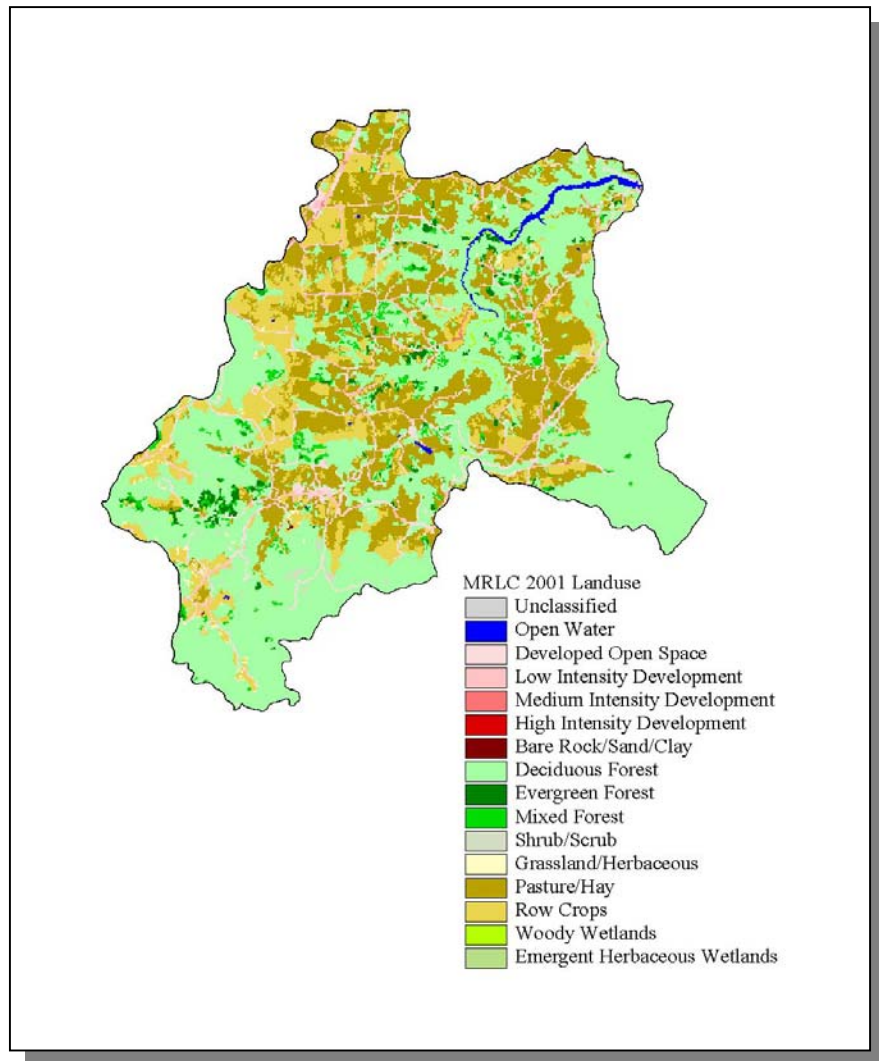
CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.26
Grass (Hayland)	0.31
Legumes, Grass (Hayland)	2.89
Grass, Forbs, Legumes (Mixed Pasture)	0.67
Corn (Row Crops)	4.35
Soybeans (Row Crops)	10.79
Wheat (Close-Grown Cropland)	7.00
Other Vegetable and Truck Crops	21.46
Conservation Reserve Program Lands	0.46
Farmsteads and Ranch Headquarters	0.58

**Table 4-69. Annual Estimated Total Soil Loss in Subwatershed 051301050202.**

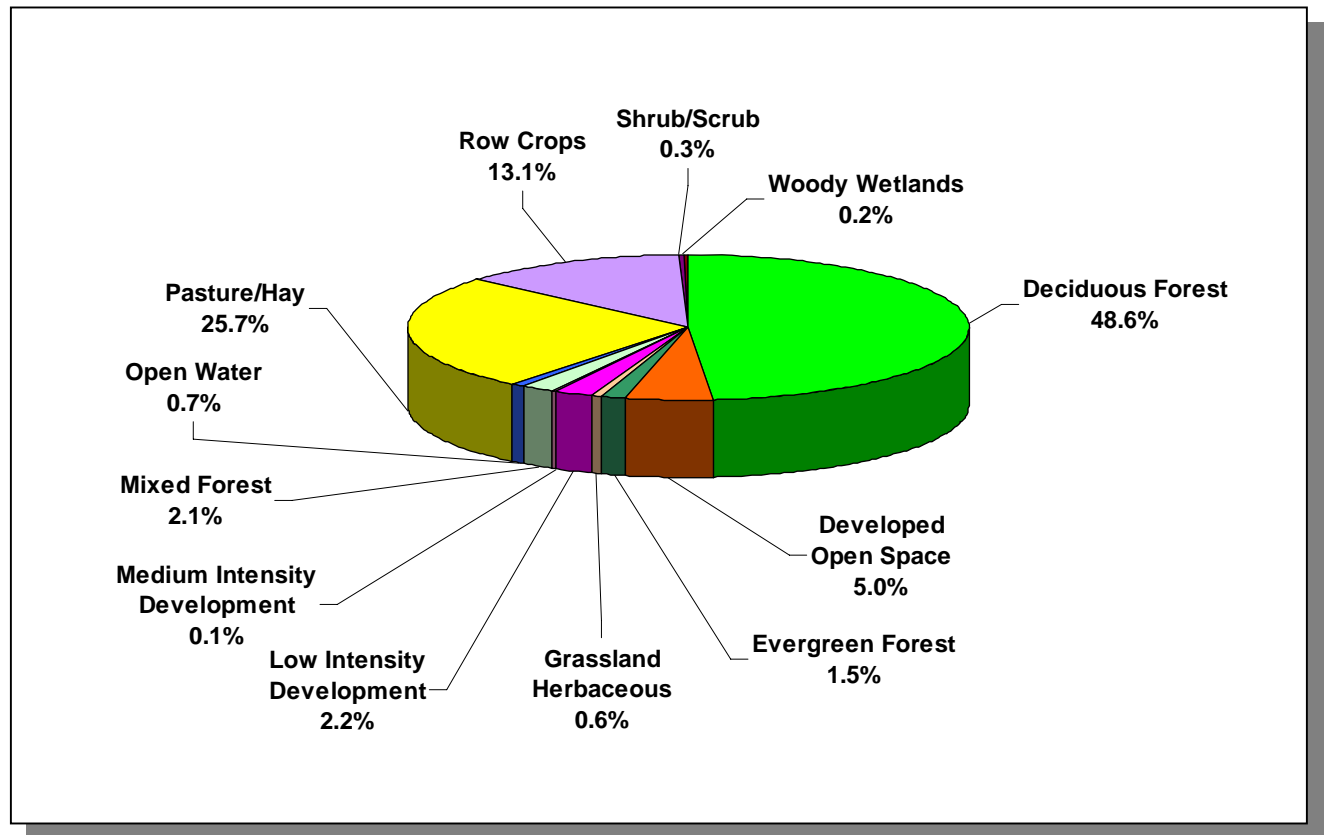
**4.2.B.iii.** 051301050203 (West Fork Obey River).



**Figure 4-72. Location of Subwatershed 051301050203.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.

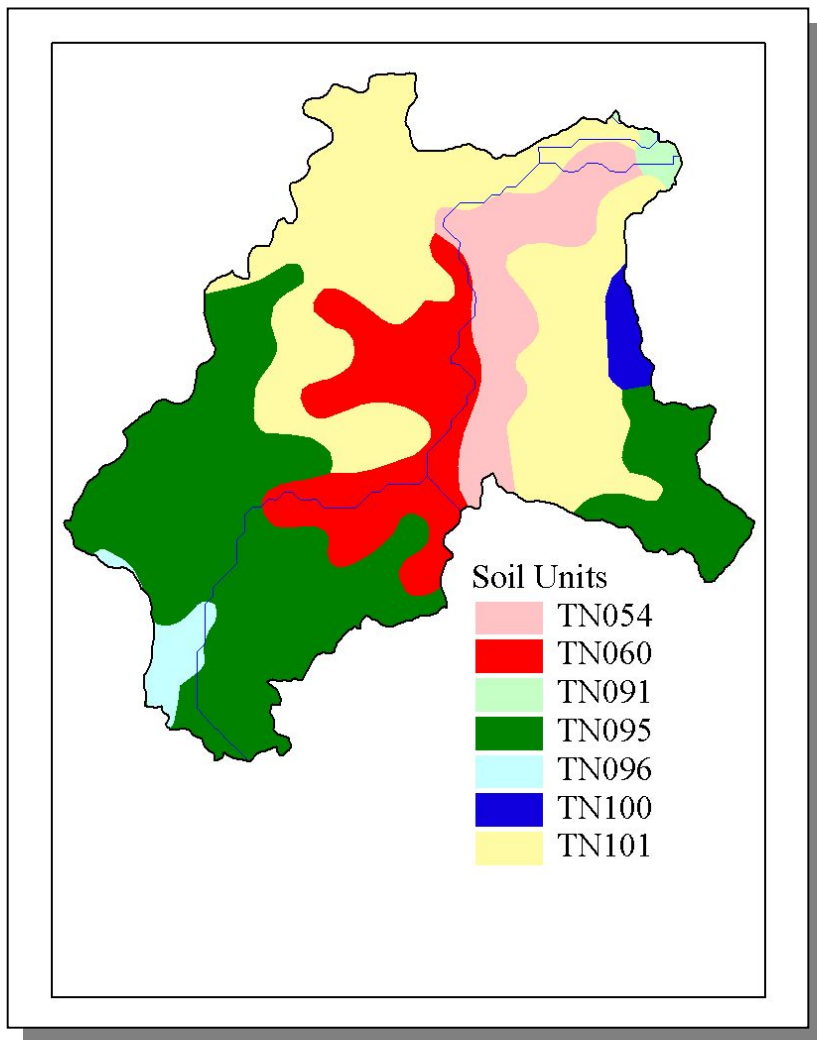


**Figure 4-73. Illustration of Land Use Distribution in Subwatershed 051301050203.**



**Figure 4-74. Land Use Distribution in Subwatershed 051301050203.** More information is provided in Appendix IV.





**Figure 4-75. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050203.**

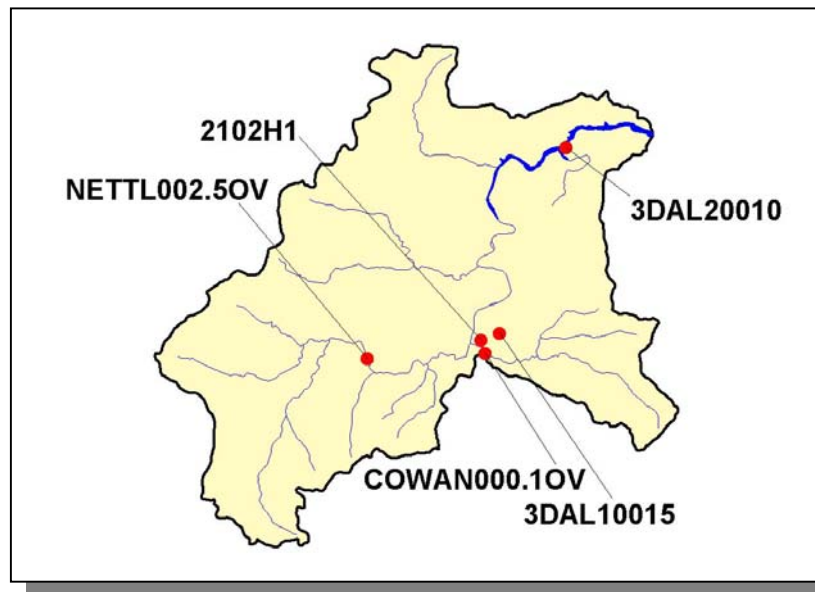
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN060	5.00	B	1.30	5.32	Silty Loam	0.39
TN091	0.00	B	2.95	5.86	Loam	0.34
TN095	0.00	B	2.35	5.12	Loam	0.31
TN096	10.00	C	1.22	5.16	Silty Loam	0.38
TN100	0.00	B	1.14	3.35	Silty Loam	0.21

**Table 4-70. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050203.** The definition of "Hydrologic Group" is provided in Appendix IV.

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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Overton	17,636	19,171	20,118	8.72	1,538	1,672	1,755	14.1
Pickett	4,548	4,631	4,945	0.51	23	23	25	8.7
<b>Total</b>	<b>22,184</b>	<b>23,802</b>	<b>25,063</b>		<b>1,561</b>	<b>1,695</b>	<b>1,780</b>	<b>14.0</b>

**Table 4-71. Population Estimates in Subwatershed 051301050203.**



**Figure 4-76. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050203.** More information, including site names and locations, is provided in Appendix IV.

**4.2.B.iii.a. Point Source Contributions.**

There are no point source contributions in this subwatershed.

**4.2.B.iii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
1,824	3,347	142	6	96	7

**Table 4-72. Summary of Livestock Count Estimates in Subwatershed 051301050203.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Overton	15,150	27,812	1,200	1,173	811	59
Pickett	5,986	10,864	19	284	99	0

**Table 4-73. Summary of Livestock Count Estimates in Overton and Pickett Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

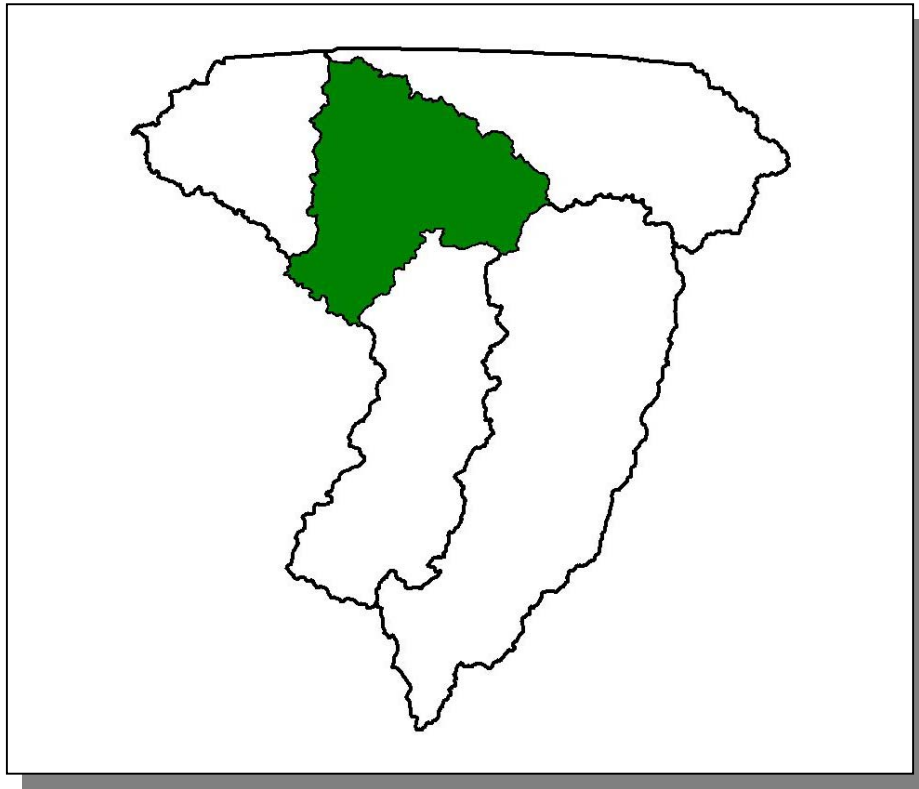
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Overton	170.3	170.3	1.7	7.0
Pickett	68.4	68.4	0.2	0.6

**Table 4-74. Forest Acreage and Annual Removal Rates (1987-1994) in Overton and Pickett Counties.**

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.28
Grass (Hayland)	0.31
Legumes, Grass (Hayland)	2.82
Grass, Forbs, Legumes (Mixed Pasture)	0.67
Corn (Row Crops)	4.35
Soybeans (Row Crops)	10.79
Tobacco (Row Crops)	23.18
Wheat (Close-Grown Cropland)	7.00
Other Vegetation and Truck Crops	21.46
Conservation Reserve Program Lands	0.46
Farmsteads and Ranch Headquarters	0.75

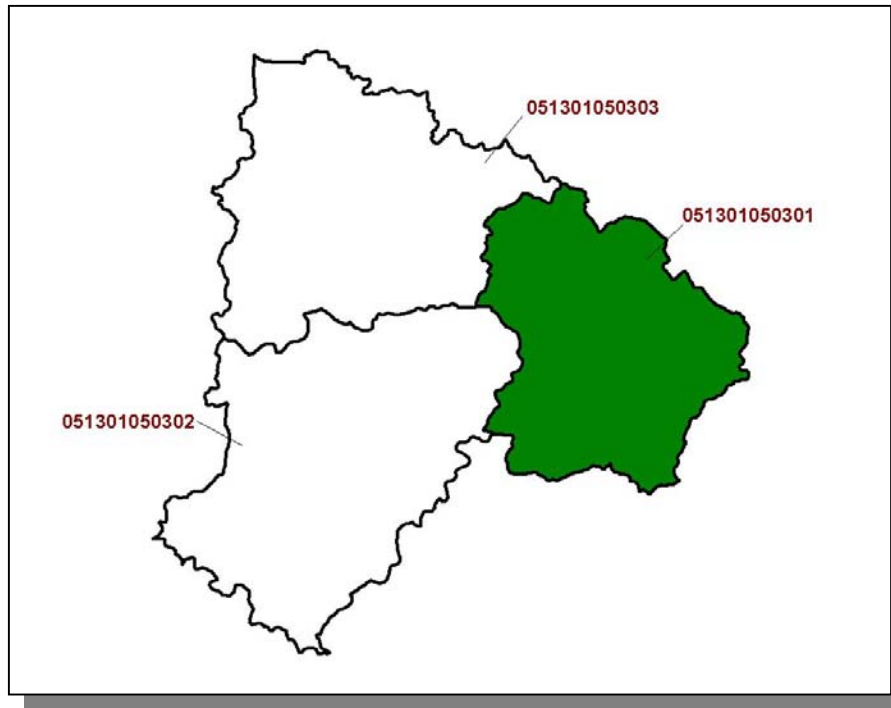
**Table 4-75. Annual Estimated Total Soil Loss in Subwatershed 051301050203.**

**4.2.C. 0513010503.**

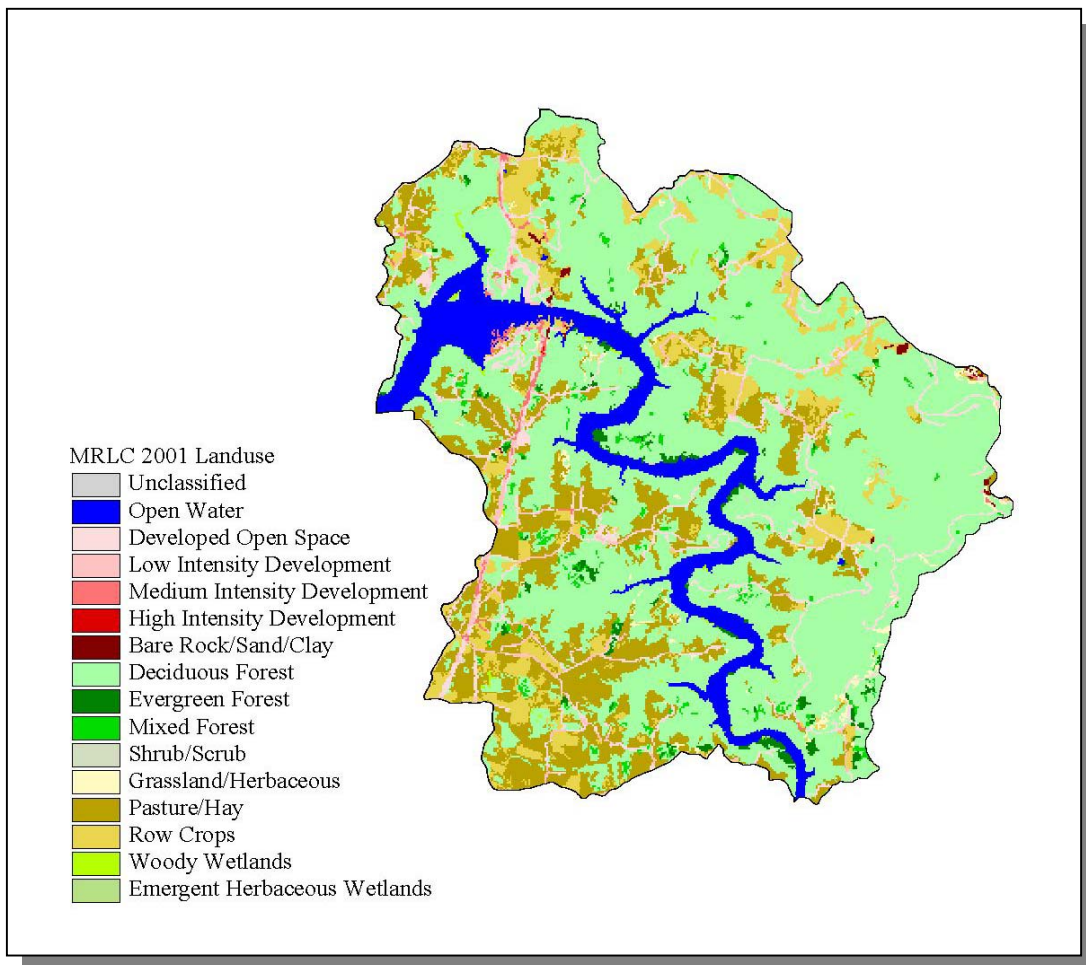


**Figure 4-77. Location of Subwatershed 0513010503.** All Obey River HUC-10 subwatershed boundaries in Tennessee are shown for reference.

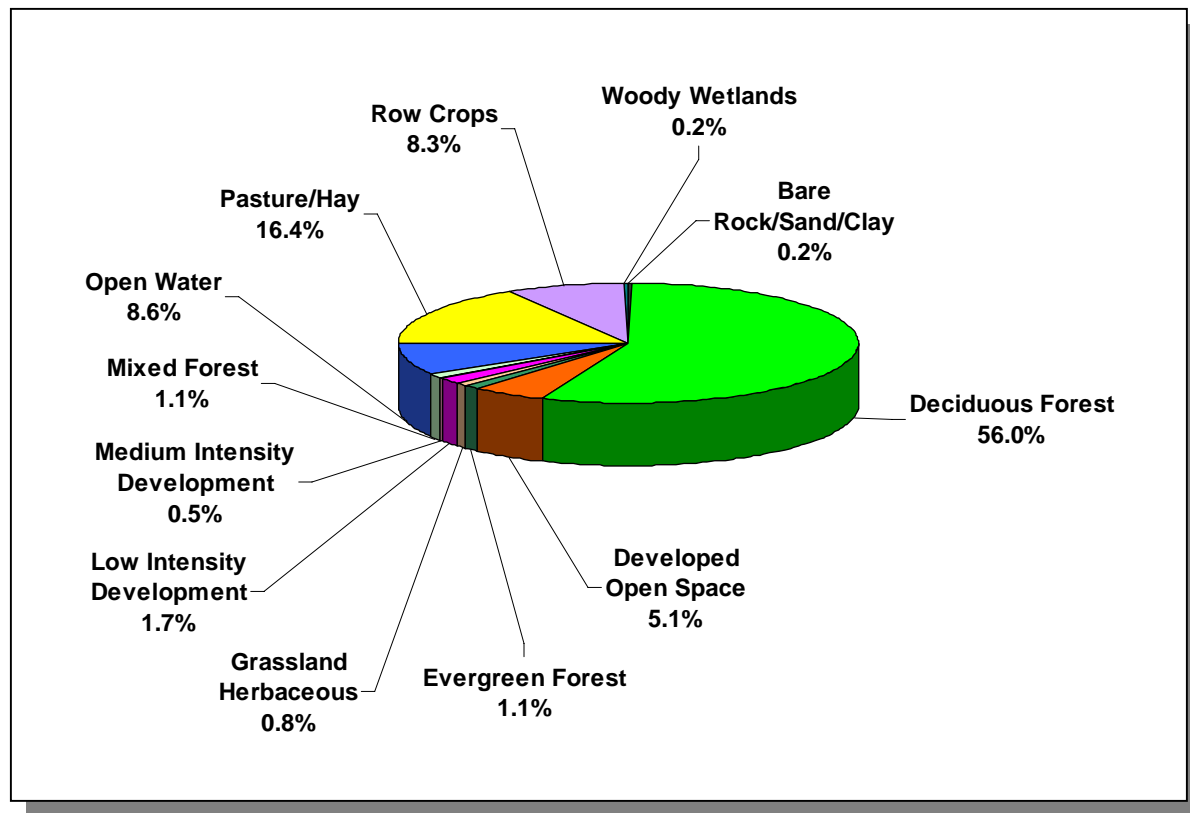
**4.2.C.i. 051301050301 (Obey River).**



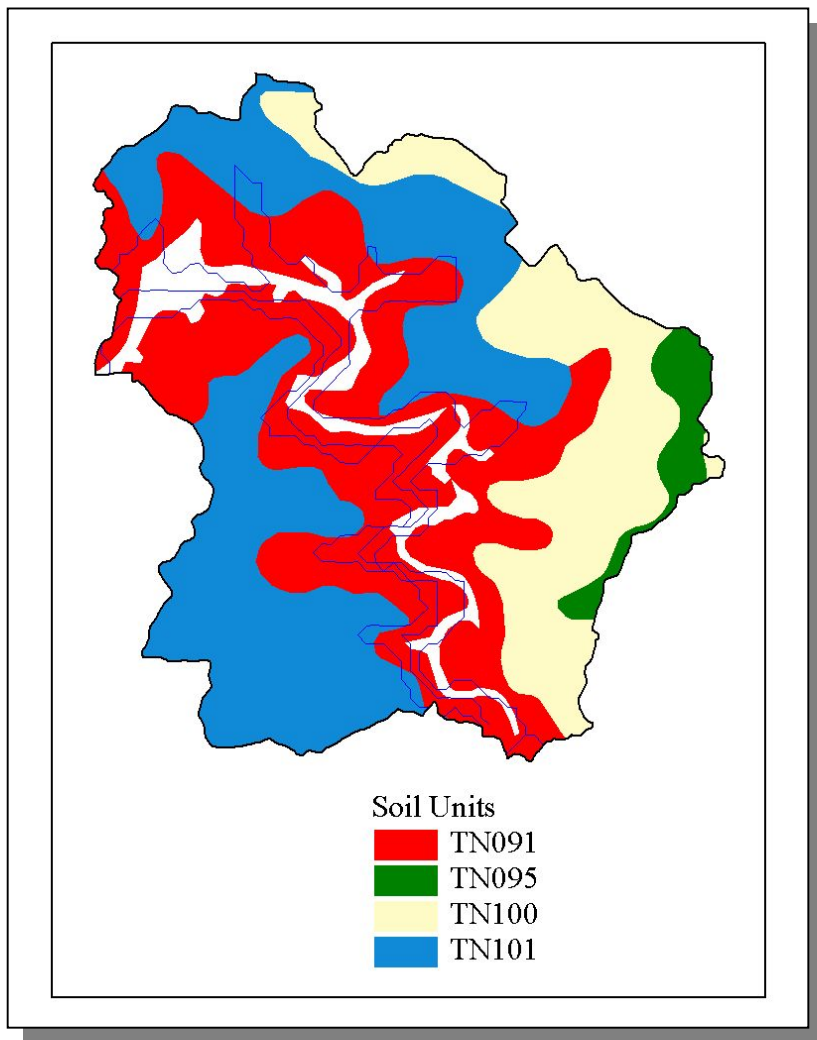
**Figure 4-78. Location of Subwatershed 051301050301.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.



**Figure 4-79. Illustration of Land Use Distribution in Subwatershed 051301050301.**



**Figure 4-80. Land Use Distribution in Subwatershed 051301050301.** More information is provided in Appendix IV.



**Figure 4-81. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050301.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN091	0.00	B	2.95	5.86	Loam	0.34
TN095	0.00	B	2.35	5.12	Loam	0.31
TN100	0.00	B	1.14	3.35	Silty Loam	0.21
TN101	0.00	B	1.71	5.39	Loam	0.35

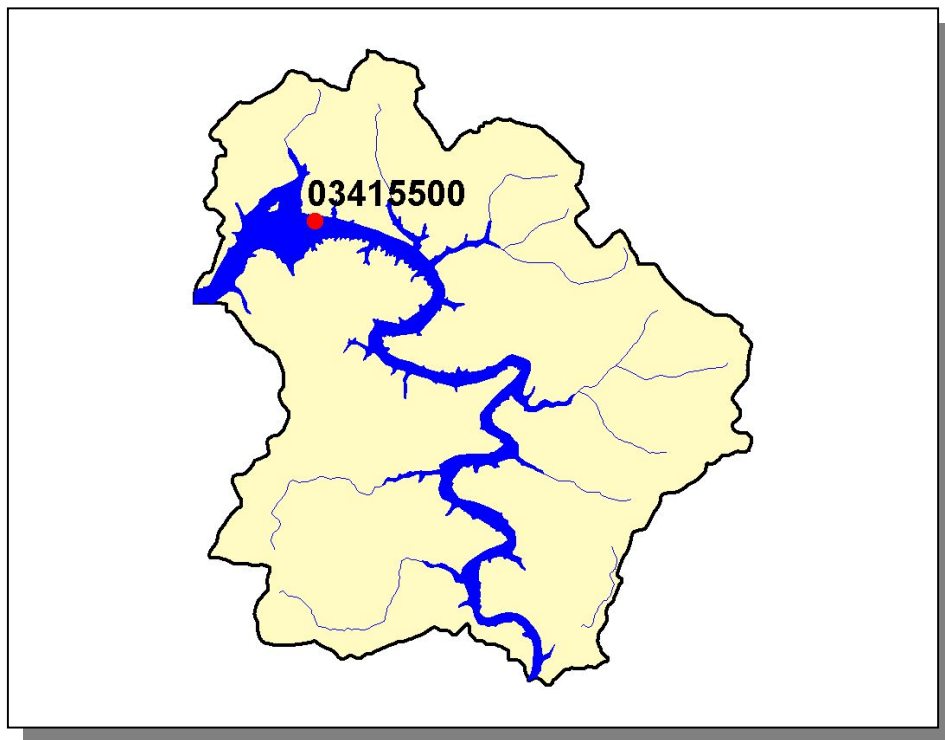
**Table 4-76. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050301.** The definition of "Hydrologic Group" is provided in Appendix IV.



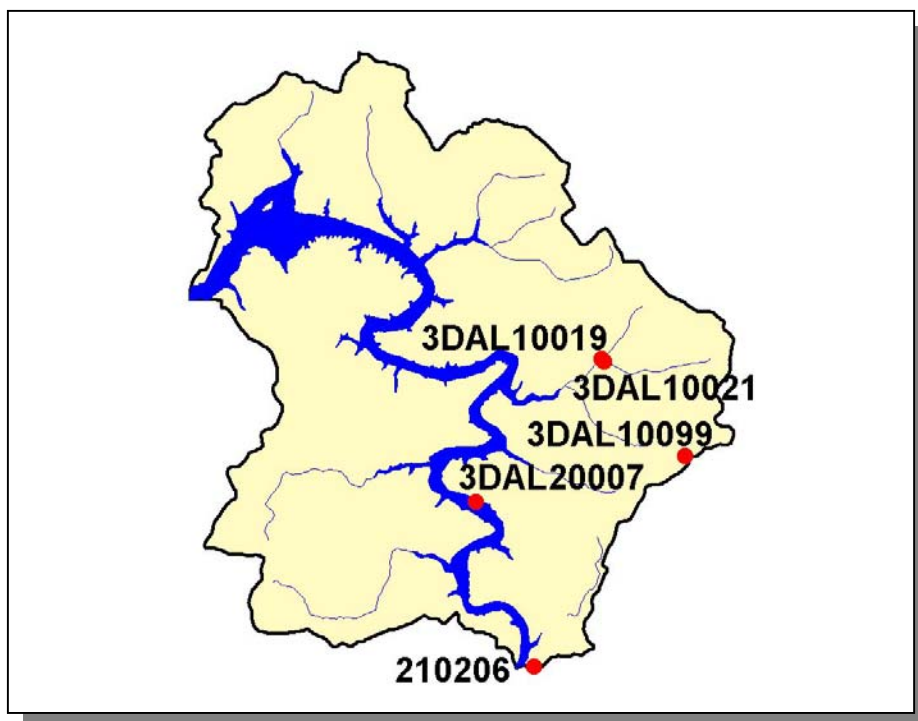
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	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	Portion of Watershed (%)	1990	1997	2000	% Change (1990-2000)
Fentress	14,669	15,920	16,625	0.08	12	13	13	8.3
Overton	17,636	19,171	20,118	0.85	151	164	172	13.9
Pickett	4,548	4,631	4,945	17.8	810	824	880	8.6
<b>Total</b>	<b>36,853</b>	<b>39,722</b>	<b>41,688</b>		<b>973</b>	<b>1,001</b>	<b>1,065</b>	<b>9.5</b>

*Table 4-77. Population Estimates in Subwatershed 051301050301.*

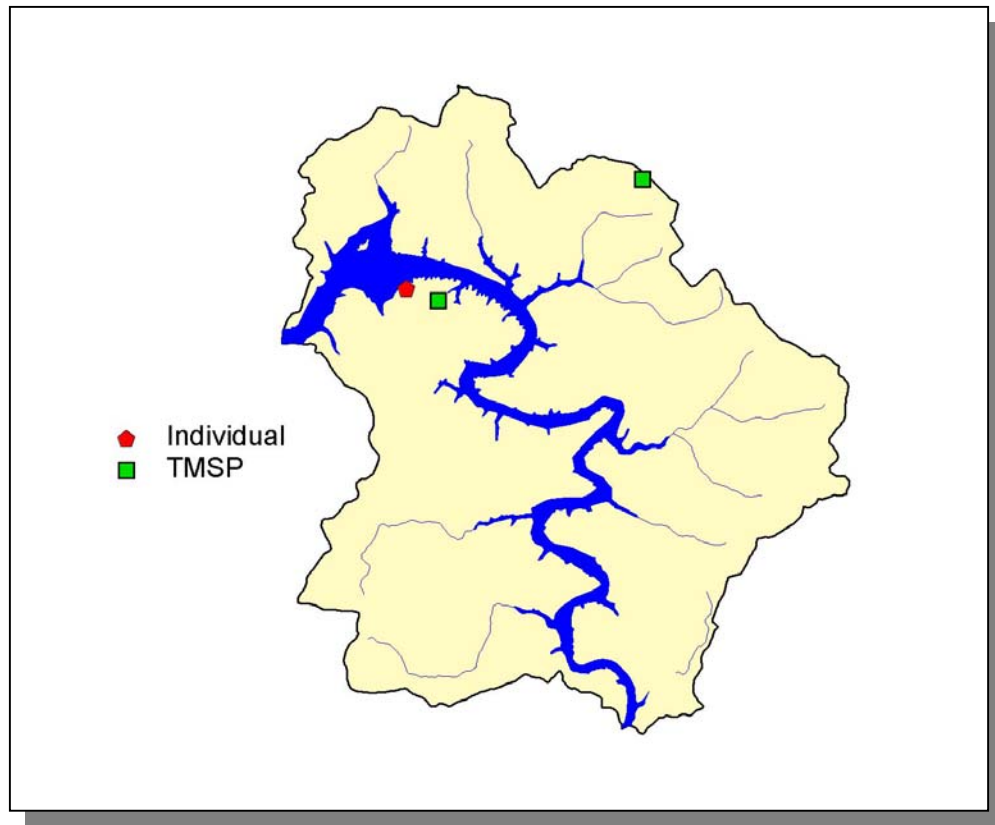


**Figure 4-82. Location of Historical Streamflow Data Collection Sites in Subwatershed 051301050301.** More information is provided in Appendix IV.

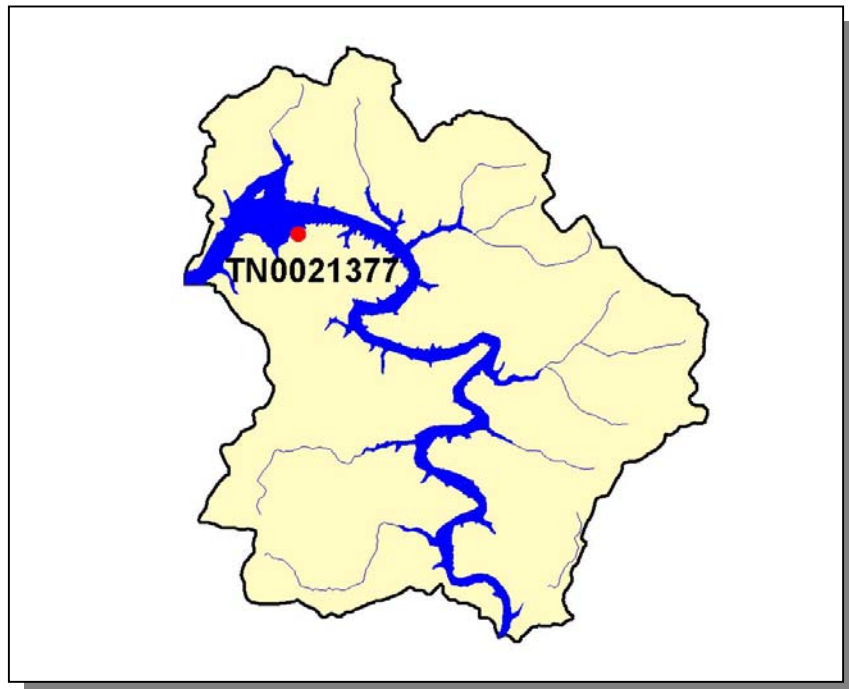


**Figure 4-83. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050301.** More information, including site names and locations, is provided in Appendix IV.

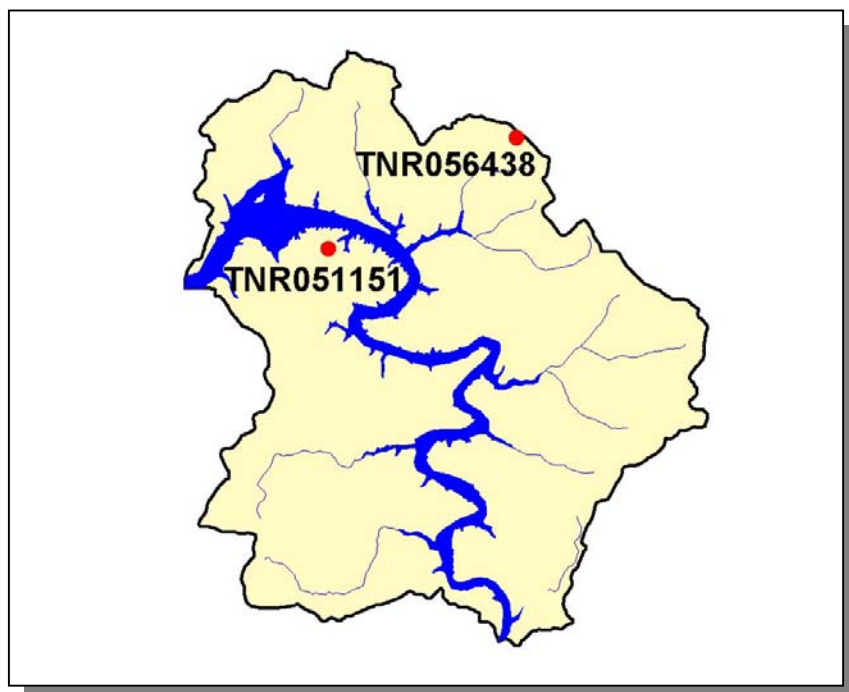
**4.2.C.i.a. Point Source Contributions.**



**Figure 4-84. Location of Permits Issued in Subwatershed 051301050301.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-85. Location of Active NPDES Sites in Subwatershed 051301050301.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-86. Location of TMSP Sites in Subwatershed 051301050301.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.C.i.b. Nonpoint Source Contributions.**

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
1,409	2,565	33	<5	644	37	<5

**Table 4-78. Summary of Livestock Count Estimates in Subwatershed 051301050301.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

<b>LIVESTOCK COUNTS</b>							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Fentress	8,058	17,259	430	474	7,290,026	729	79
Overton	15,150	27,812	1,200	1,173	0	811	59
Pickett	5,986	10,864	19	285	0	99	0

**Table 4-79. Summary of Livestock Count Estimates in Cumberland, Fentress, Overton, and Pickett Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat..

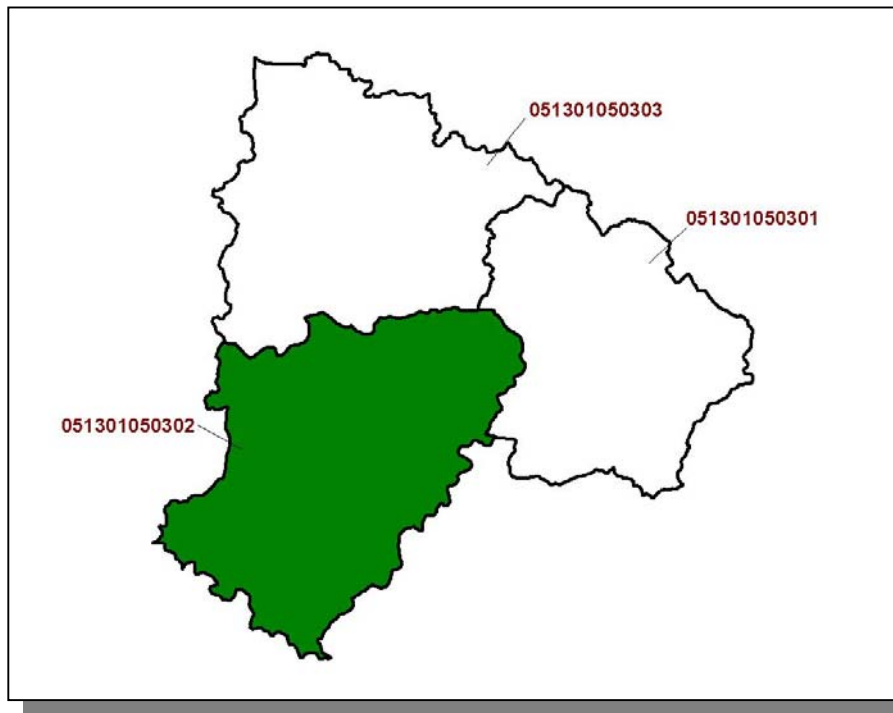
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Fentress	244.1	244.1	3.6	14.3
Overton	170.3	170.3	1.7	7.0
Pickett	68.4	68.4	0.2	0.6

**Table 4-80. Forest Acreage and Annual Removal Rates (1987-1994) in Fentress, Overton, and Pickett Counties.**

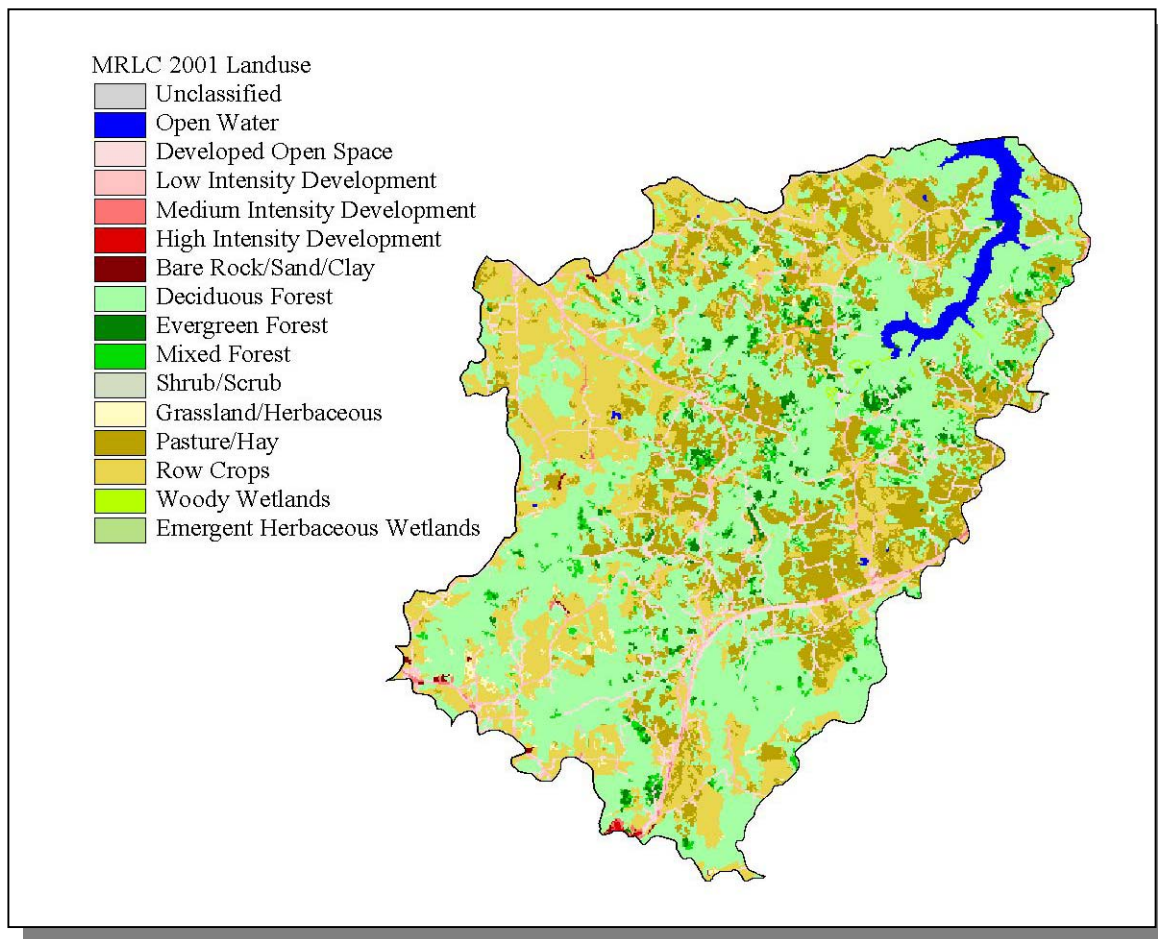
<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Grass (Pastureland)	1.01
Grass (Hayland)	0.13
Legumes, Grass (Hayland)	0.36
Grass, Forbs, Legumes (Mixed Pasture)	0.69
Corn (Row Crops)	5.49
Soybeans (Row Crops)	10.33
Tobacco (Row Crops)	23.18
Wheat (Close-Grown Cropland)	10.51
Other Vegetable and Truck Crops	20.93
Conservation Reserve Program Lands	0.46
Farmsteads and Ranch Headquarters	6.65

**Table 4-81. Annual Estimated Total Soil Loss in Subwatershed 051301050301.**

**4.2.C.ii.** 051301050302 (Eagle Creek).

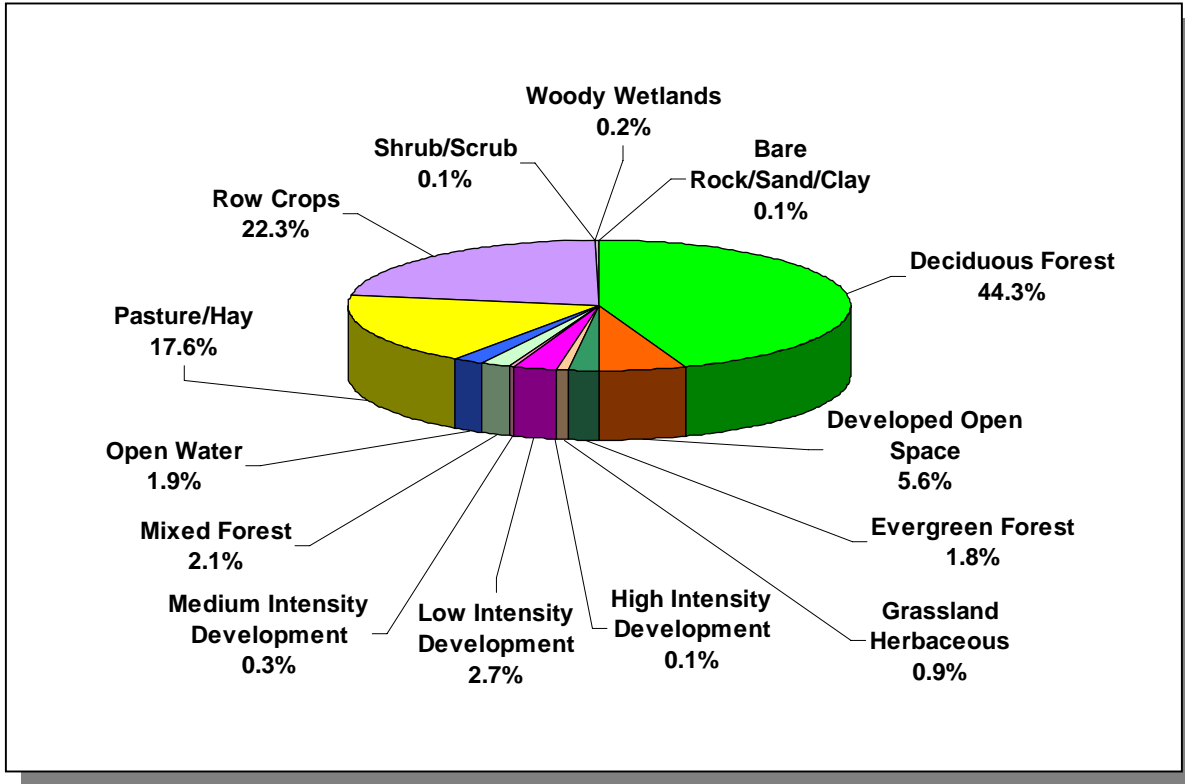


**Figure 4-87. Location of Subwatershed 051301050302.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.



**Figure 4-88. Illustration of Land Use Distribution in Subwatershed 051301050302.**

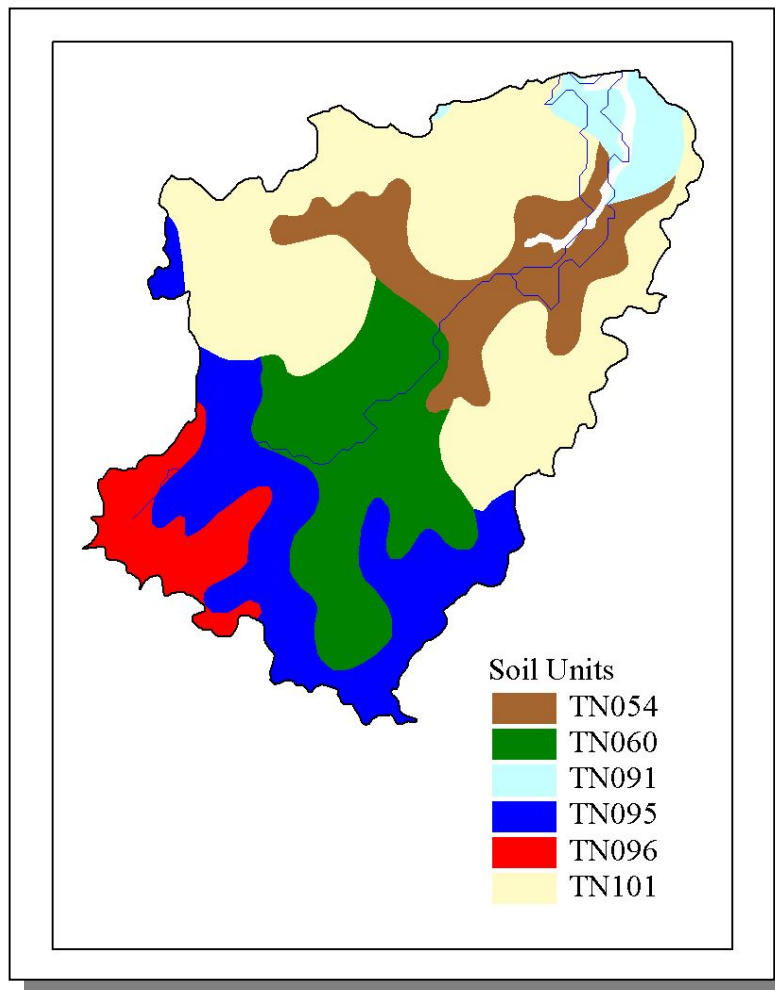
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**Figure 4-89. Land Use Distribution in Subwatershed 051301050302.** More information is provided in Appendix IV.



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**Figure 4-90. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050302.**

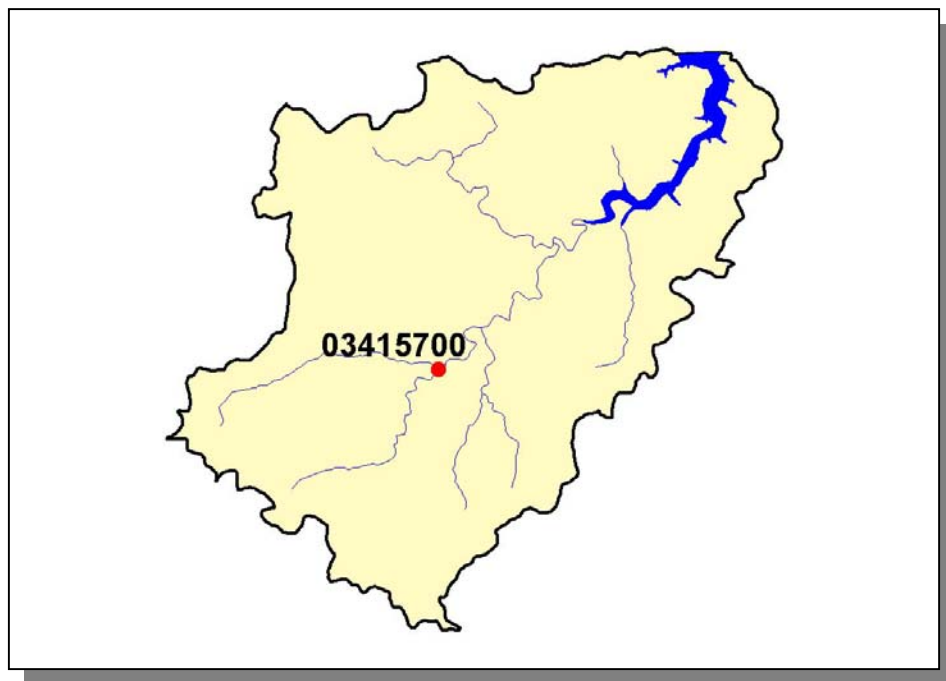
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN060	5.00	B	1.30	5.32	Silty Loam	0.39
TN091	0.00	B	2.95	5.86	Loam	0.34
TN095	0.00	B	2.35	5.12	Loam	0.31
TN096	10.00	C	1.22	5.16	Silty Loam	0.38
TN101	0.00	B	1.71	5.39	Loam	0.35

**Table 4-82. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050302.** The definition of "Hydrologic Group" is provided in Appendix IV.

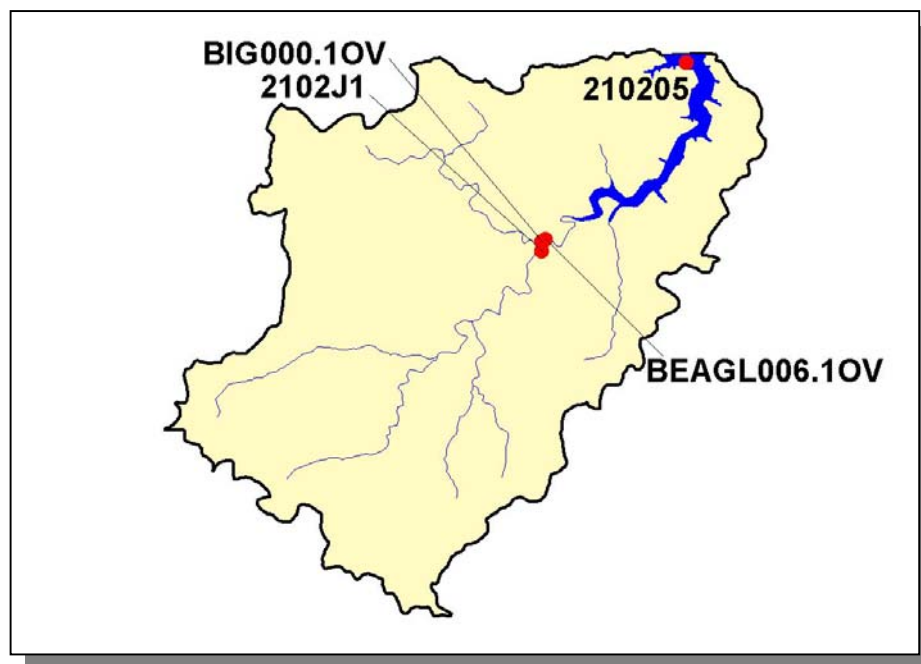
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Overton	17,636	19,171	20,118	10.98	1,936	2,104	2,208	14.0
Pickett	4,548	4,631	4,945	0.78	35	36	38	8.6
<b>Total</b>	<b>22,184</b>	<b>23,802</b>	<b>25,063</b>		<b>1,971</b>	<b>2,140</b>	<b>2,246</b>	<b>14.0</b>

*Table 4-83. Population Estimates in Subwatershed 051301050302.*

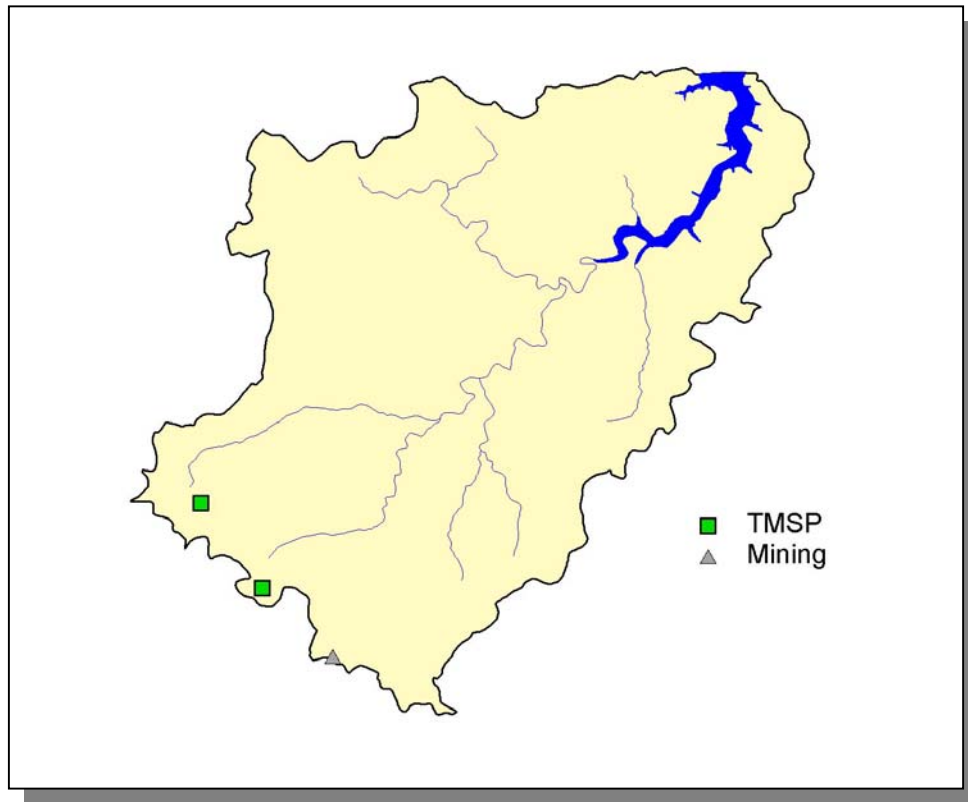


**Figure 4-91. Location of Historical Streamflow Data Collection Sites in Subwatershed 051301050302.** More information is provided in Appendix IV.



**Figure 4-92. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050302.** More information, including site names and locations, is provided in Appendix IV.

**4.2.C.ii.a. Point Source Contributions.**



**Figure 4-93. Location of Permits Issued in Subwatershed 051301050302.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-94. Location of Active Mining Sites in Subwatershed 051301050302.** More information, including the names of mining operations, is provided in Appendix IV.



**Figure 4-95. Location of TMSF Sites in Subwatershed 051301050302.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.C.ii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
2,492	4,574	195	8	132	10

**Table 4-84. Summary of Livestock Count Estimates in Subwatershed 051301050302.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Overton	15,150	27,812	1,200	1,173	811	59
Pickett	5,986	10,864	19	285	99	0

**Table 4-85. Summary of Livestock Count Estimates in Overton and Pickett Counties.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

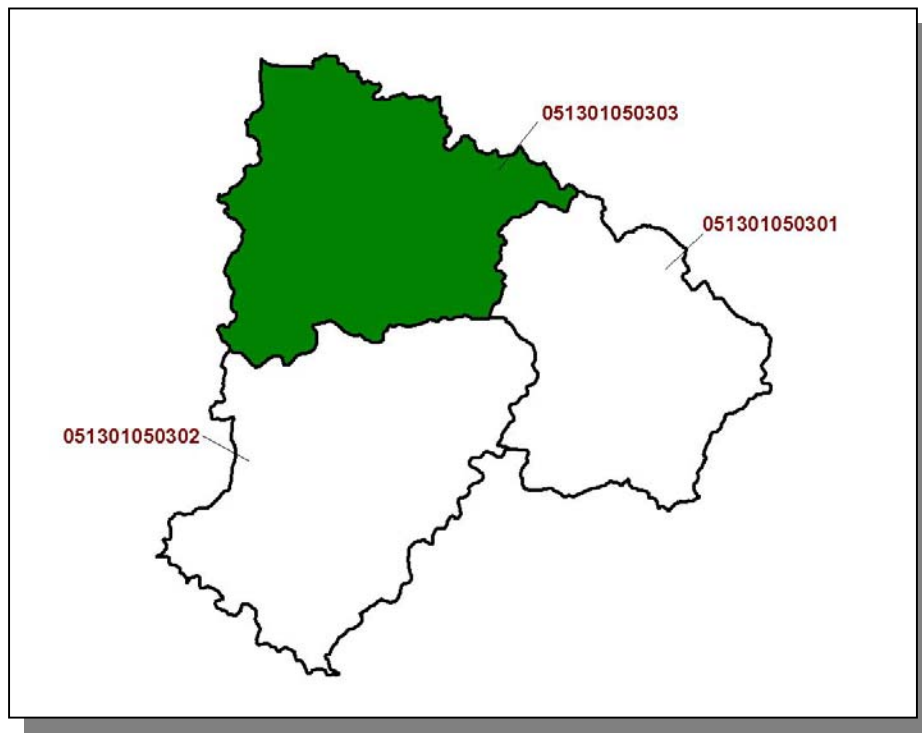
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Overton	170.3	170.3	1.7	7.0
Pickett	68.4	68.4	0.2	0.6

**Table 4-86. Forest Acreage and Annual Removal Rates (1987-1994) in Overton and Pickett Counties.**

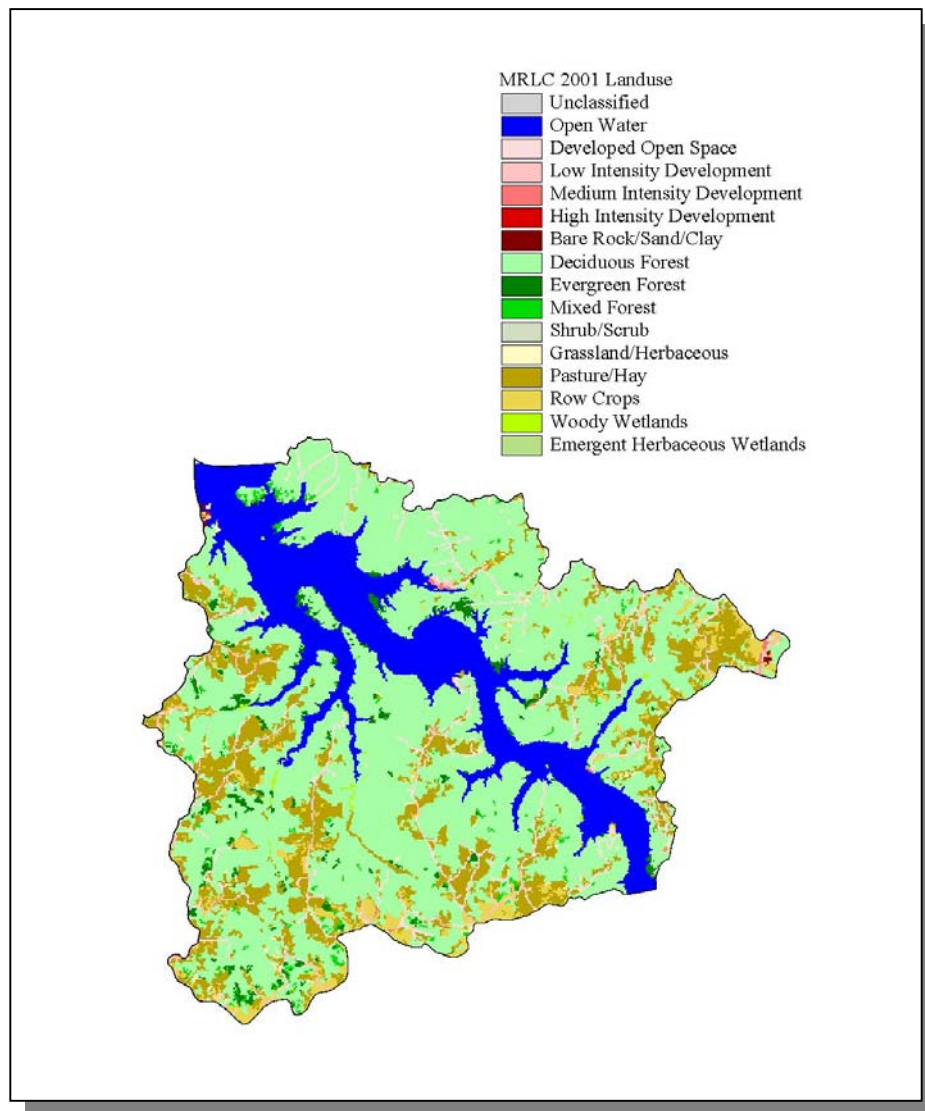
CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.28
Grass (Hayland)	0.30
Legumes, Grass (Hayland)	2.81
Grass, Forbs, Legumes (Mixed Pasture)	0.67
Corn (Row Crops)	4.35
Soybeans (Row Crops)	10.79
Tobacco (Row Crops)	23.18
Wheat (Close-Grown Cropland)	7.00
Other Vegetable and Truck Crops	2.46
Conservation Reserve Program Lands	0.46
Farmsteads and Ranch Headquarters	0.79

**Table 4-87. Annual Estimated Total Soil Loss in Subwatershed 051301050302.**

**4.2.C.iii. 051301050303 (Obey River).**



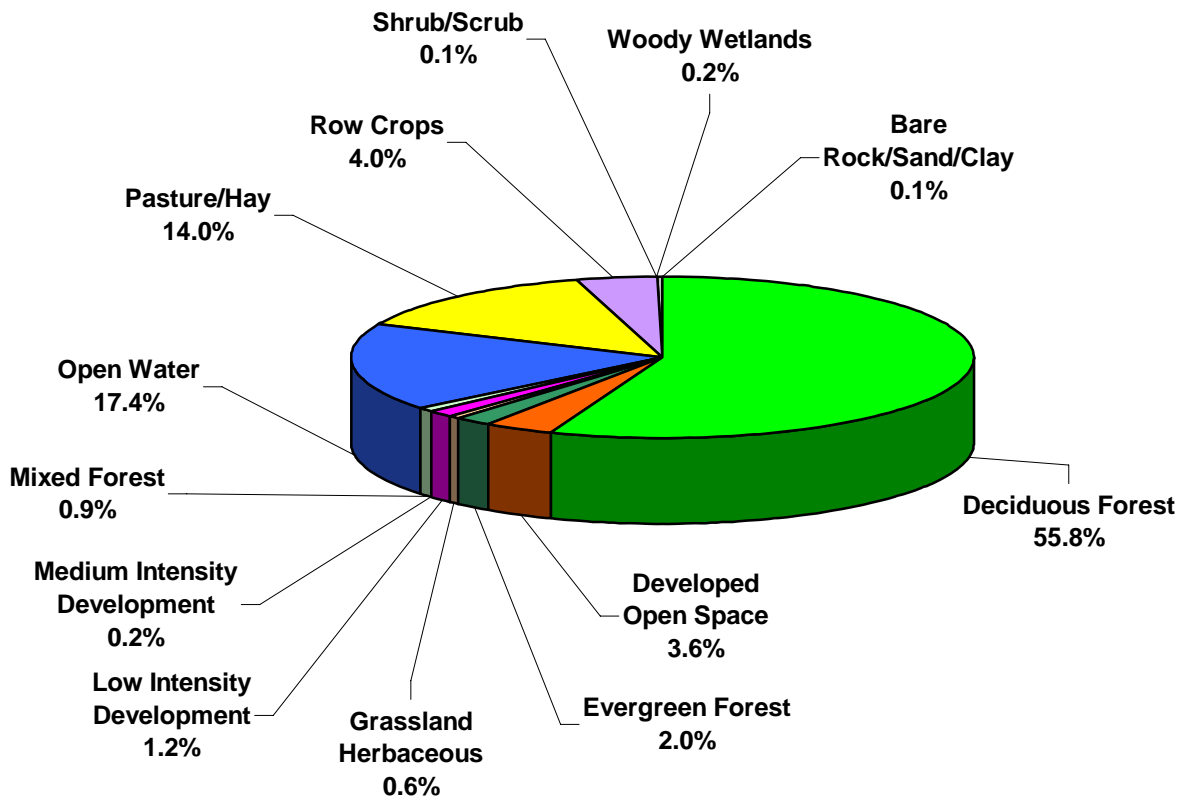
**Figure 4-96. Location of Subwatershed 051301050303.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.



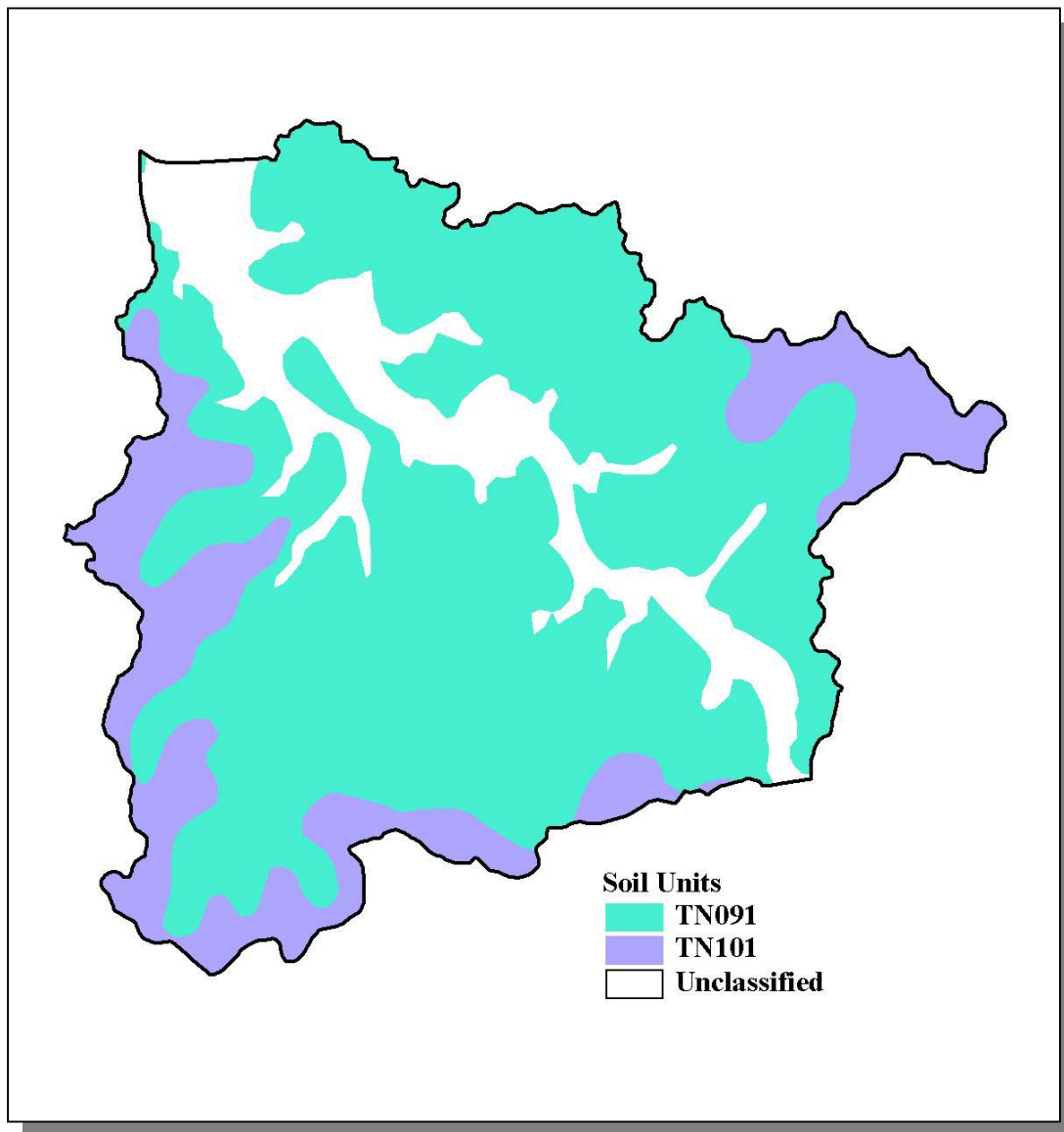
*Figure 4-97. Illustration of Land Use Distribution in Subwatershed 051301050303.*



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**Figure 4-98. Land Use Distribution in Subwatershed 051301050303.** More information is provided in Appendix IV.



**Figure 4-99. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050303.**

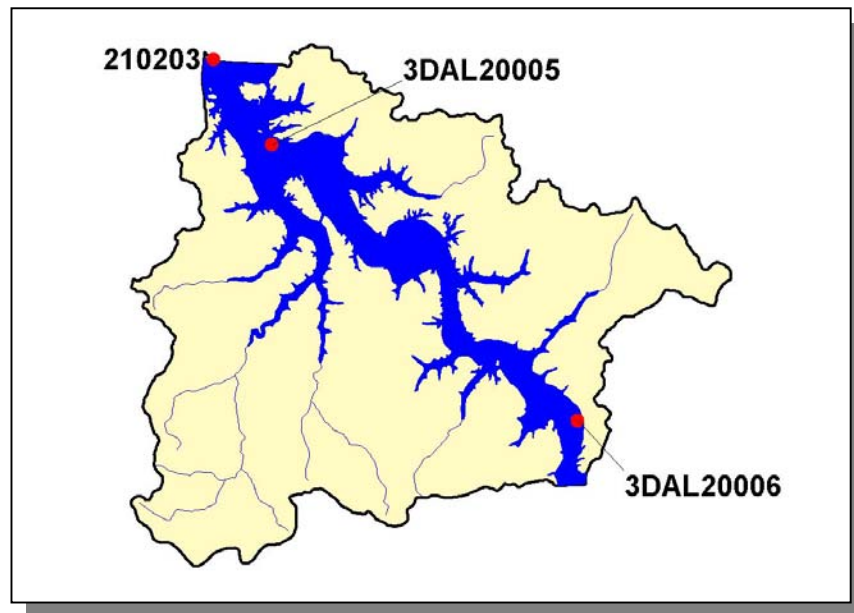
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN091	0.00	B	2.95	5.86	Loam	0.34
TN101	0.00	B	1.71	5.39	Loam	0.35

**Table 4-88. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050303.** The definition of "Hydrologic Group" is provided in Appendix IV.

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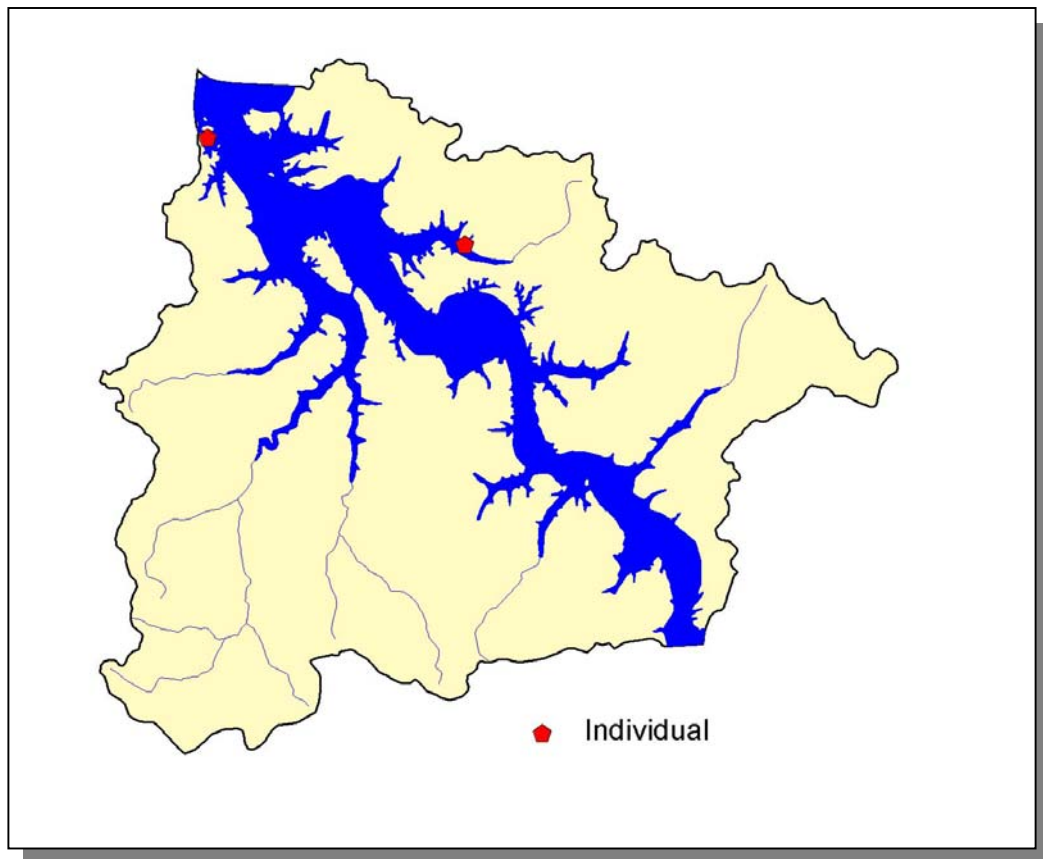
County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Clay	7,238	7,311	7,976	3.43	248	251	274	10.5
Overton	17,636	19,171	20,118	1.69	298	324	340	14.1
Pickett	4,548	4,631	4,945	14.21	646	658	703	8.8
<b>Total</b>	<b>29,422</b>	<b>31,113</b>	<b>33,039</b>		<b>1,192</b>	<b>1,233</b>	<b>1,317</b>	<b>10.5</b>

*Table 4-89. Population Estimates in Subwatershed 051301050303.*

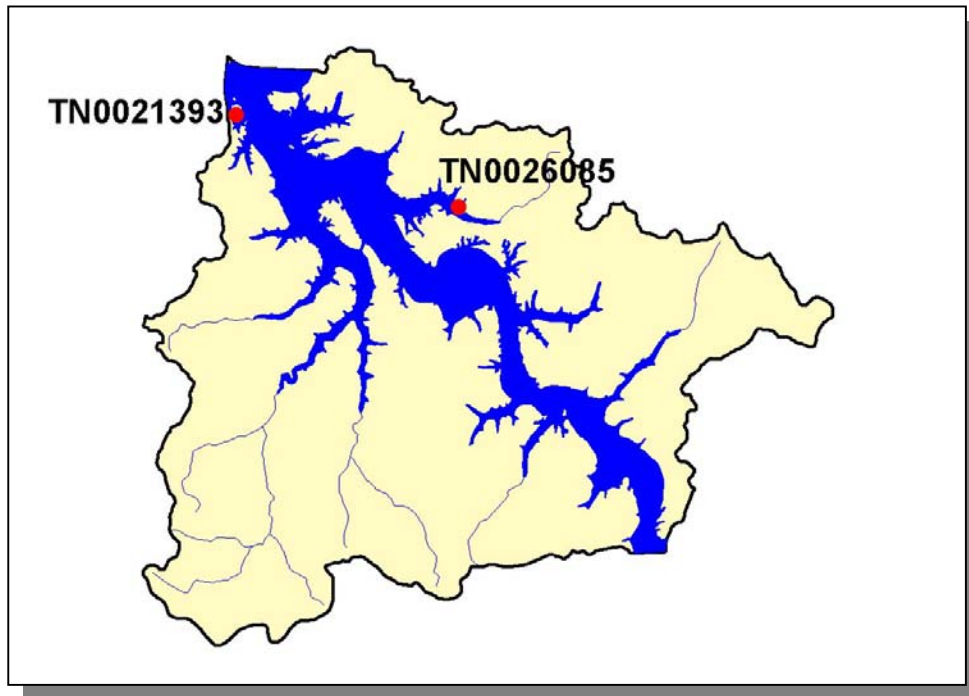


*Figure 4-100. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050303. More information, including site names and locations, is provided in Appendix IV.*

**4.2.C.iii.a. Point Source Contributions.**



**Figure 4-101. Location of Permits Issued in Subwatershed 051301050303.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-102. Location of Active NPDES Sites in Subwatershed 051301050303.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.C.iii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
780	2,541	26	<5	38	<5

**Table 4-90. Summary of Livestock Count Estimates in Subwatershed 051301050303.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Clay	0	14,574	0	18	174	23
Overton	15,150	27,812	1,200	1,173	811	59
Pickett	5,986	10,864	19	285	99	0

**Table 4-91. Summary of Livestock Count Estimates in Clay, Overton, and Pickett Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

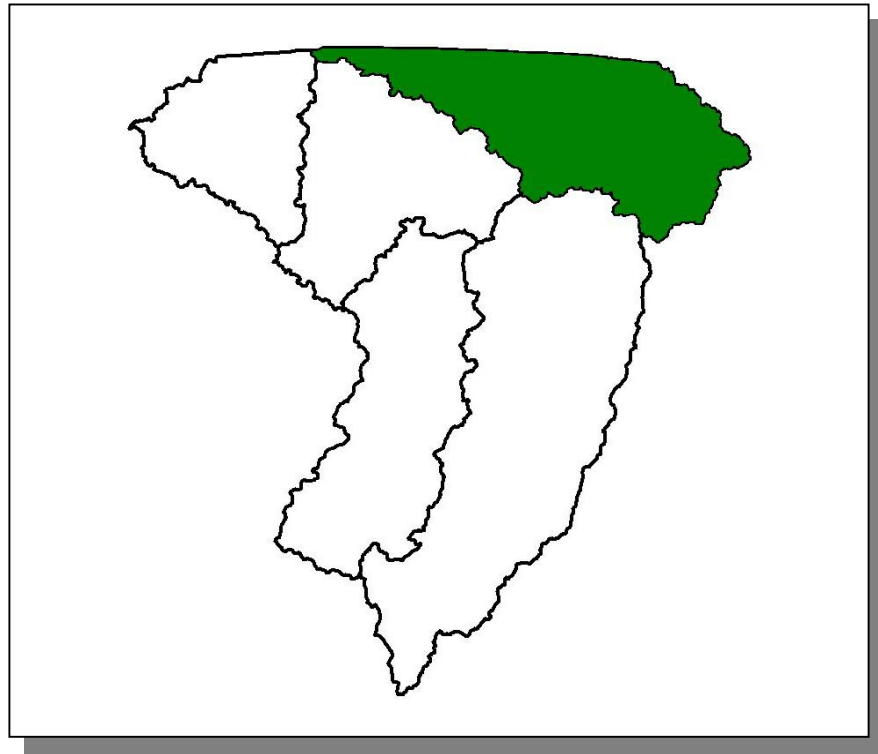
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Clay	105.1	105.1	2.3	10.1
Overton	170.3	170.3	1.7	7.0
Pickett	68.4	68.4	0.2	0.6

**Table 4-92. Forest Acreage and Annual Removal Rates (1987-1994) in Clay, Overton, and Pickett Counties.**

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.96
Grass (Hayland)	0.20
Legumes, Grass (Hayland)	0.65
Grass, Forbs, Legumes (Mixed Pasture)	0.84
Corn (Row Crops)	4.35
Soybeans (Row Crops)	10.79
Tobacco (Row Crops)	24.55
Wheat (Close-Grown Cropland)	7.00
Other Vegetable and Truck Crops	2.46
Conservation Reserve Program Lands	0.46
Farmsteads and Ranch Headquarters	5.00

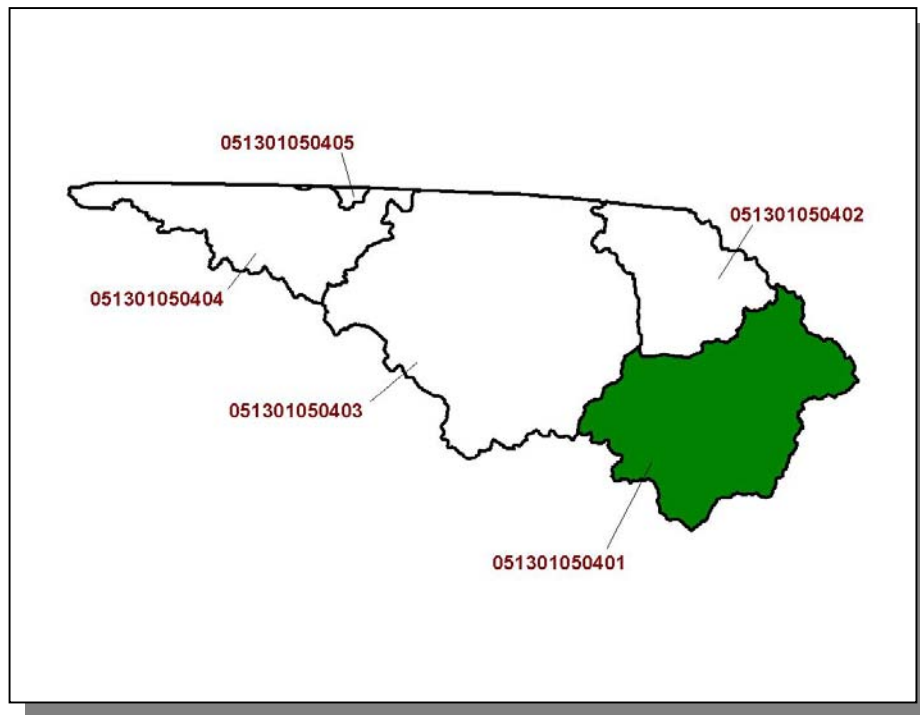
**Table 4-93. Annual Estimated Total Soil Loss in Subwatershed 051301050303.**

**4.2.D. 0513010504.**



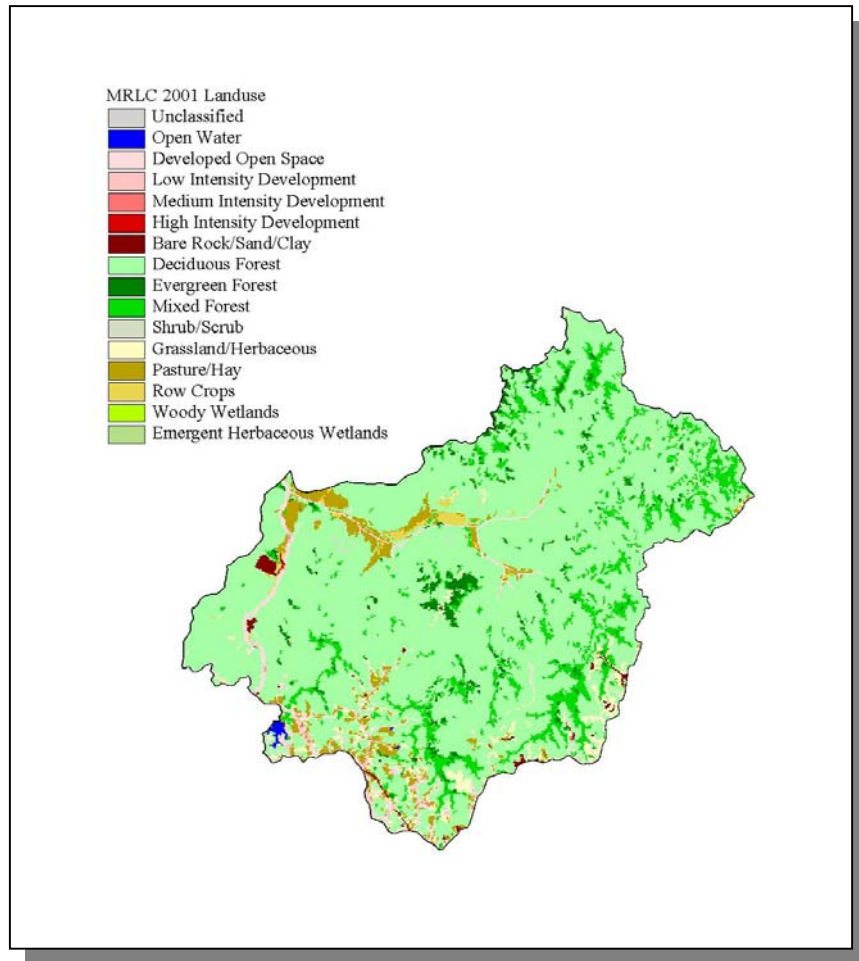
**Figure 4-103. Location of Subwatershed 0513010504.** All Obey River HUC-10 subwatershed in Tennessee boundaries are shown for reference.

**4.2.D.i. 051301050401 (Wolf River).**



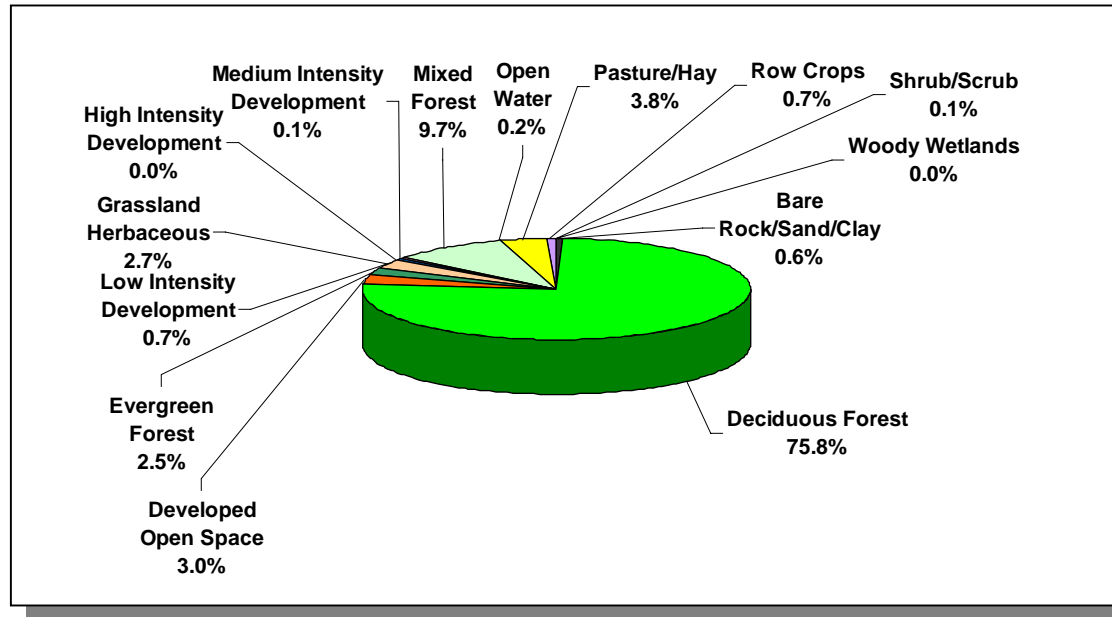
**Figure 4-104. Location of Subwatershed 051301050401.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.



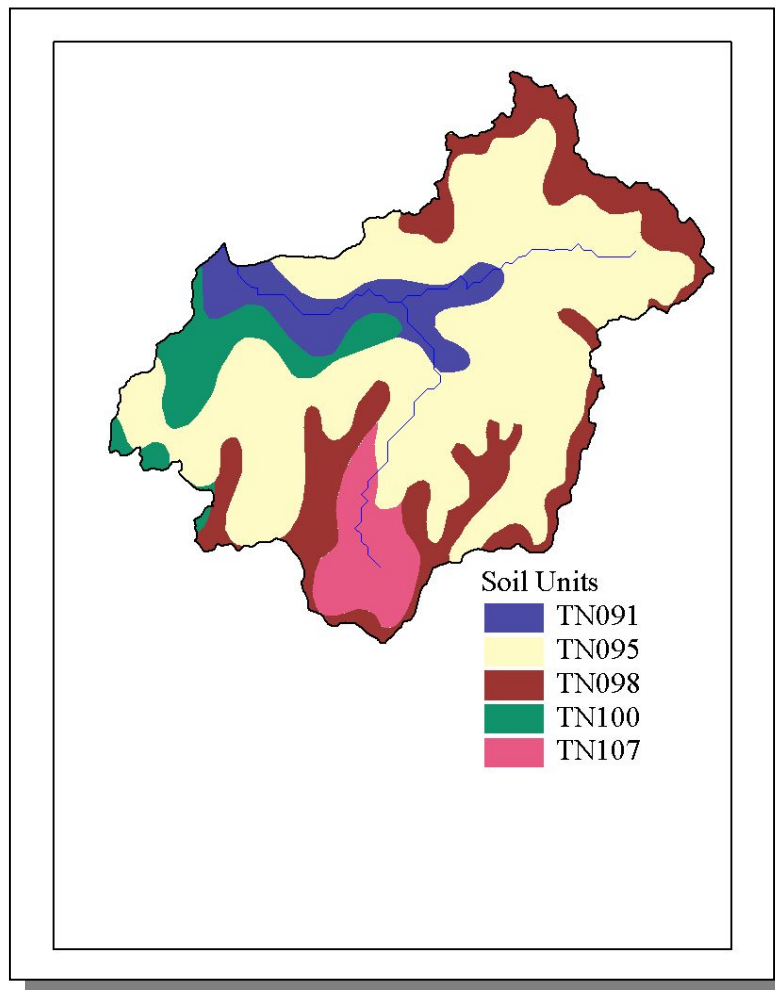


**Figure 4-105. Illustration of Land Use Distribution in Subwatershed 051301050401.**

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**Figure 4-106. Land Use Distribution in Subwatershed 051301050401.** More information is provided in Appendix IV.



**Figure 4-107. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050401.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN091	0.00	B	2.95	5.86	Loam	0.34
TN095	0.00	B	2.35	5.12	Loam	0.31
TN098	1.00	C	3.98	4.82	Loam	0.32
TN100	0.00	B	1.14	3.35	Silty Loam	0.21
TN107	1.00	C	6.34	4.84	Loam	0.28

**Table 4-94. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050401.** The definition of "Hydrologic Group" is provided in Appendix IV.

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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Fentress	14,669	15,920	16,625	8.32	1,221	1,325	1,383	13.3

**Table 4-95. Population Estimates in Subwatershed 051301050401.**

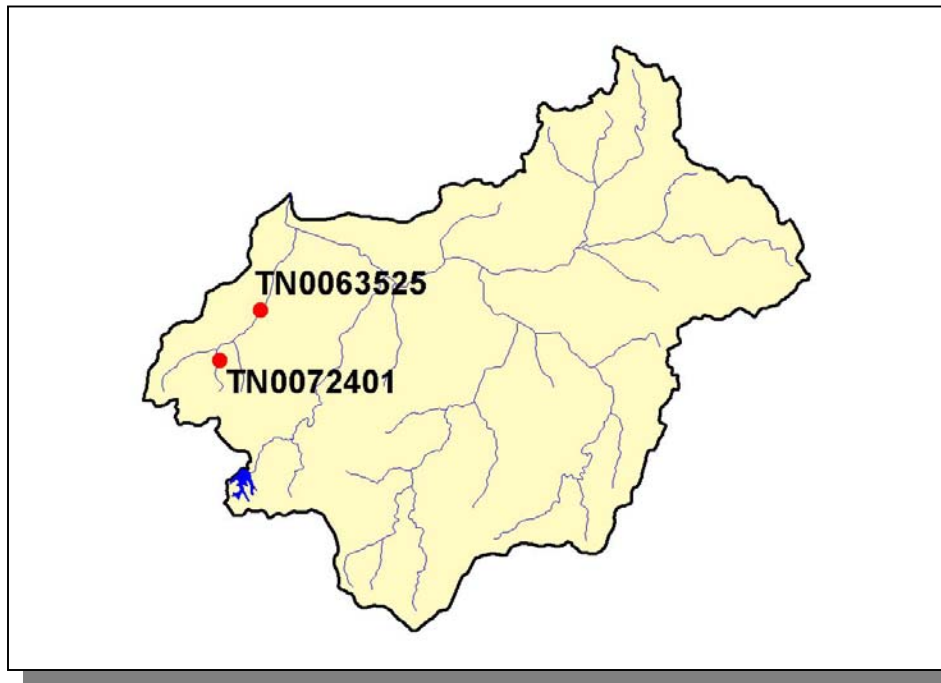


**Figure 4-108. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050401.** More information, including site names and locations, is provided in Appendix IV.

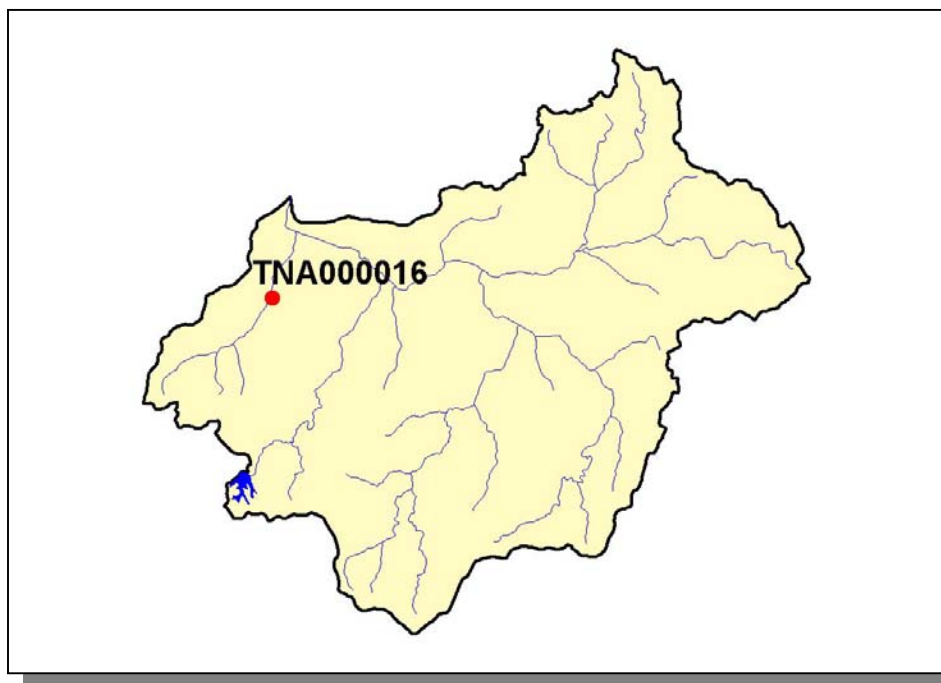
**4.2.D.i.a. Point Source Contributions.**



**Figure 4-109. Location of Permits Issued in Subwatershed 051301050401.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-110. Location of Active Mining Sites in Subwatershed 051301050401.** More information, including the names of mining operations, is provided in Appendix IV.



**Figure 4-111. Location of Concentrated Animal Feeding Operations (CAFO) in Subwatershed 051301050401.** More information, including the names of facilities, is provided in Appendix IV.

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**4.2.D.i.b. Nonpoint Source Contributions.**

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
225	483	12	<5	203,934	20	<5

**Table 4-96. Summary of Livestock Count Estimates in Subwatershed 051301050401.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

<b>LIVESTOCK COUNTS</b>							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Fentress	8,058	17,259	430	474	7,290,026	729	79

**Table 4-97. Summary of Livestock Count Estimates in Fentress County.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

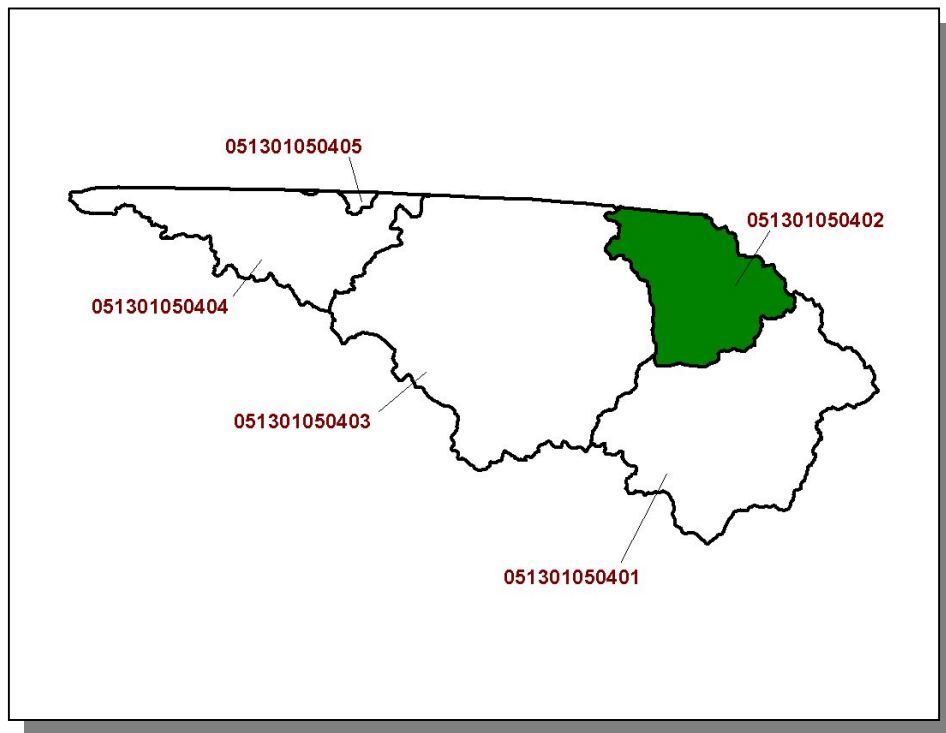
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Fentress	244.1	244.1	3.6	14.3

**Table 4-98. Forest Acreage and Annual Removal Rates (1987-1994) in Fentress County.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Grass (Pastureland)	0.72
Legumes, Grass (Hayland)	0.56
Grass, Forbs, Legumes (Mixed Pasture)	0.27
Corn (Row Crops)	16.18
Soybeans (Row Crops)	6.00
Wheat (Close-Grown Cropland)	43.40
Other Vegetable and Truck Crops	15.94
Farmsteads and Ranch Headquarters	0.40

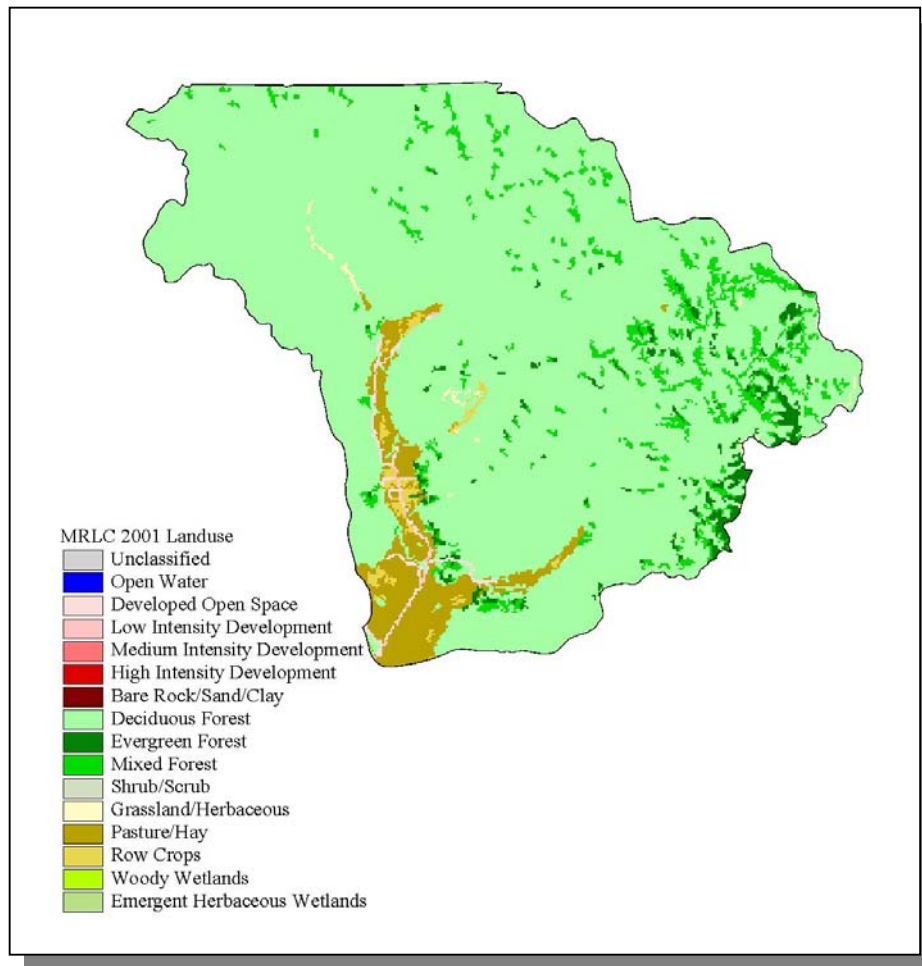
**Table 4-99. Annual Estimated Total Soil Loss in Subwatershed 051301050401.**

**4.2.D.ii.** 051301050402 (Rotten Fork Wolf River).

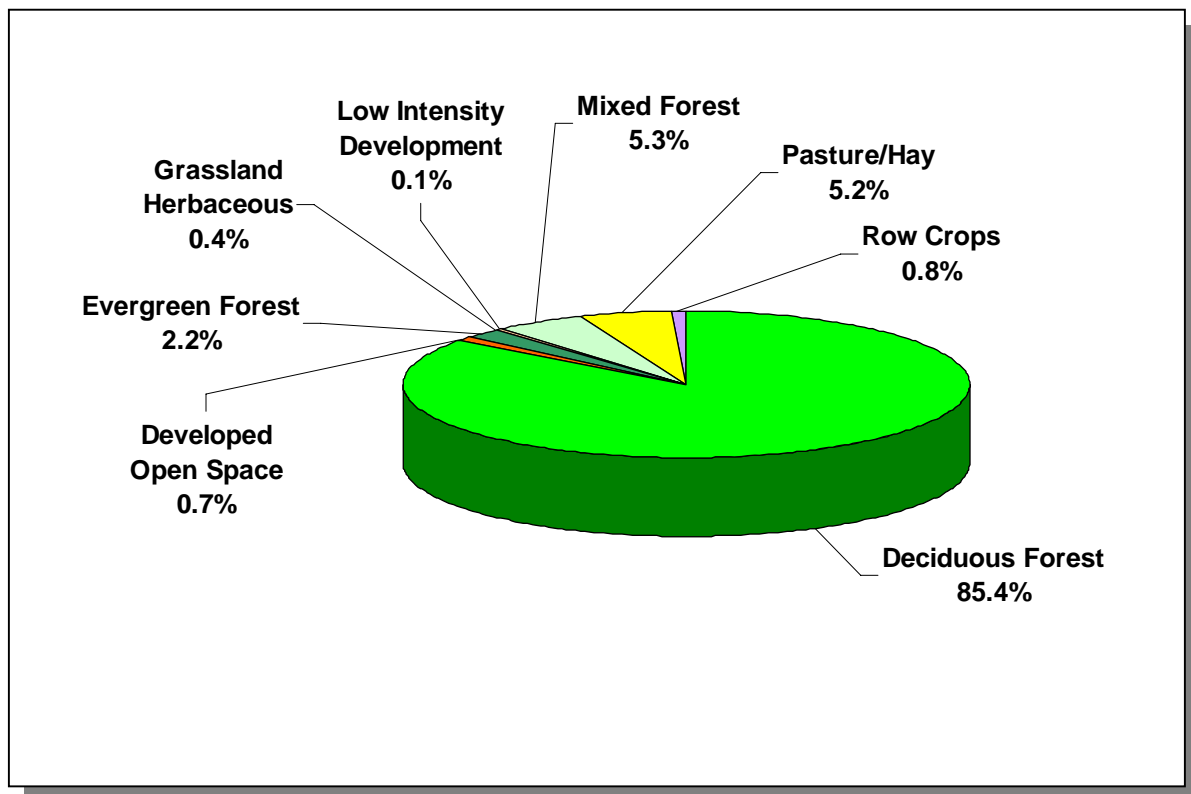


**Figure 4-112. Location of Subwatershed 051301050402.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.



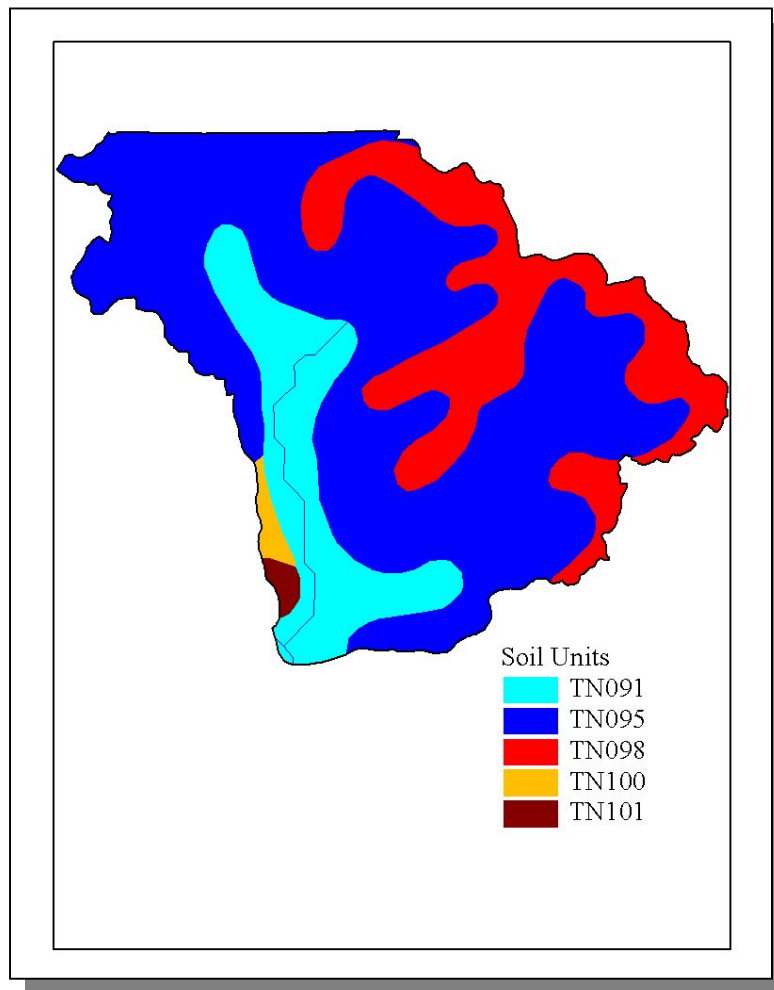


**Figure 4-113. Illustration of Land Use Distribution in Subwatershed 051301050402.**



**Figure 4-114. Land Use Distribution in Subwatershed 051301050402.** More information is provided in Appendix IV.

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**Figure 4-115. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050402.**

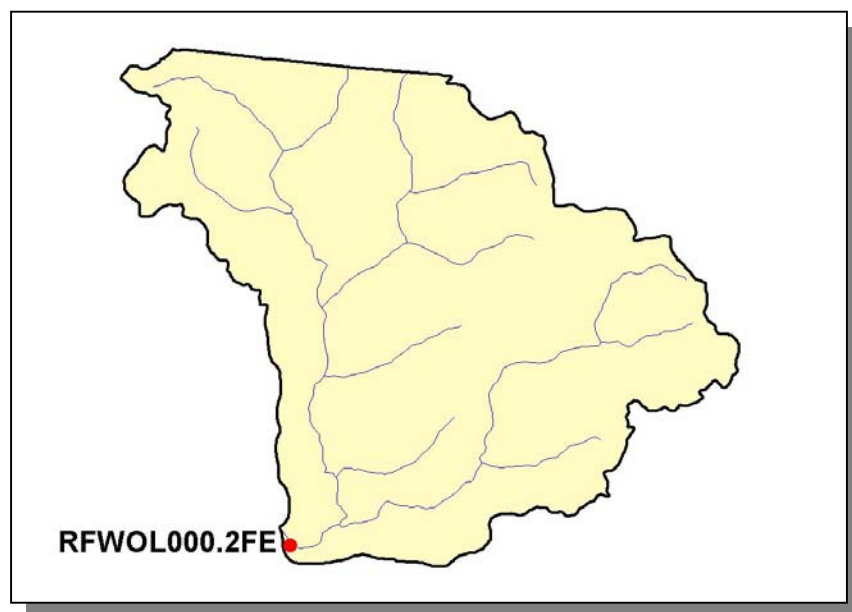
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN091	0.00	B	2.95	5.86	Loam	0.34
TN095	0.00	B	2.35	5.12	Loam	0.31
TN098	1.00	C	3.98	4.82	Loam	0.32
TN100	0.00	B	1.14	3.35	Silty Loam	0.21
TN101	0.00	B	1.71	5.39	Loam	0.35

**Table 4-100. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050402.** The definition of "Hydrologic Group" is provided in Appendix IV.

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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Fentress	14,669	15,920	16,625	2.29	336	365	381	13.4
Pickett	4,548	4,631	4,945	5.04	229	233	249	8.7
<b>Total</b>	<b>19,217</b>	<b>20,551</b>	<b>21,570</b>		<b>565</b>	<b>598</b>	<b>630</b>	<b>11.5</b>

**Table 4-101. Population Estimates in Subwatershed 051301050402.**



**Figure 4-116. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050402. More information, including site names and locations, is provided in Appendix IV.**

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**4.2.D.ii.a. Point Source Contributions.**

There are no point source contributions in this subwatershed.

**4.2.D.ii.b. Nonpoint Source Contributions.**

LIVESTOCK (COUNTS)						
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
218	464	11	<5	186,495	19	<5

**Table 4-102. Summary of Livestock Count Estimates in Subwatershed 051301050402.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

LIVESTOCK COUNTS							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Fentress	8,058	17,259	430	474	7,290,026	729	79
Pickett	5,986	10,864	19	285	0	99	0

**Table 4-103. Summary of Livestock Count Estimates in Fentress and Pickett Counties.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat..

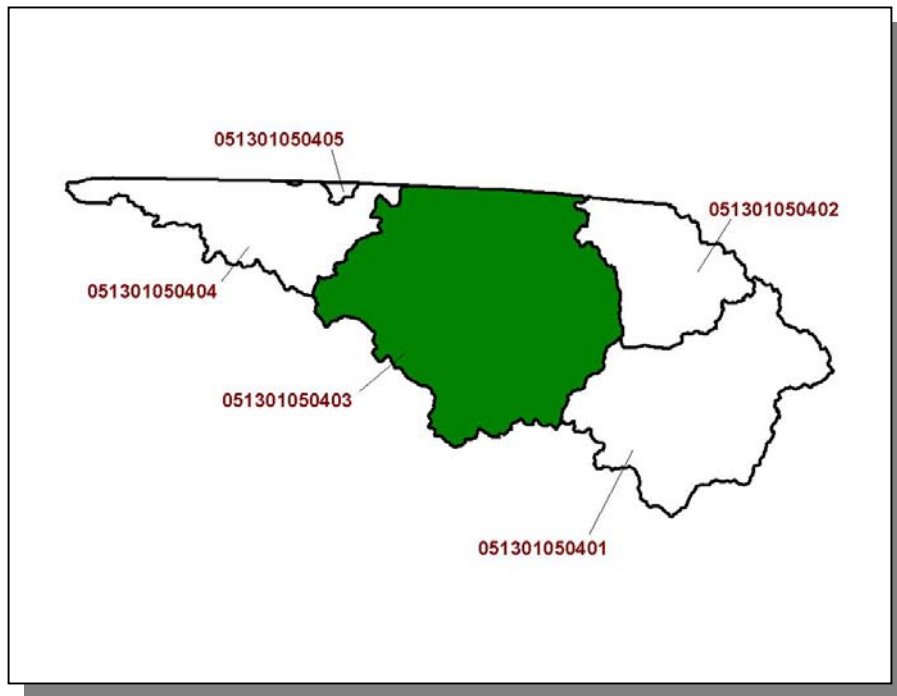
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Fentress	244.1	244.1	3.6	14.3
Pickett	68.4	68.4	0.2	0.6

**Table 4-104. Forest Acreage and Annual Removal Rates (1987-1994) in Fentress and Pickett Counties.**

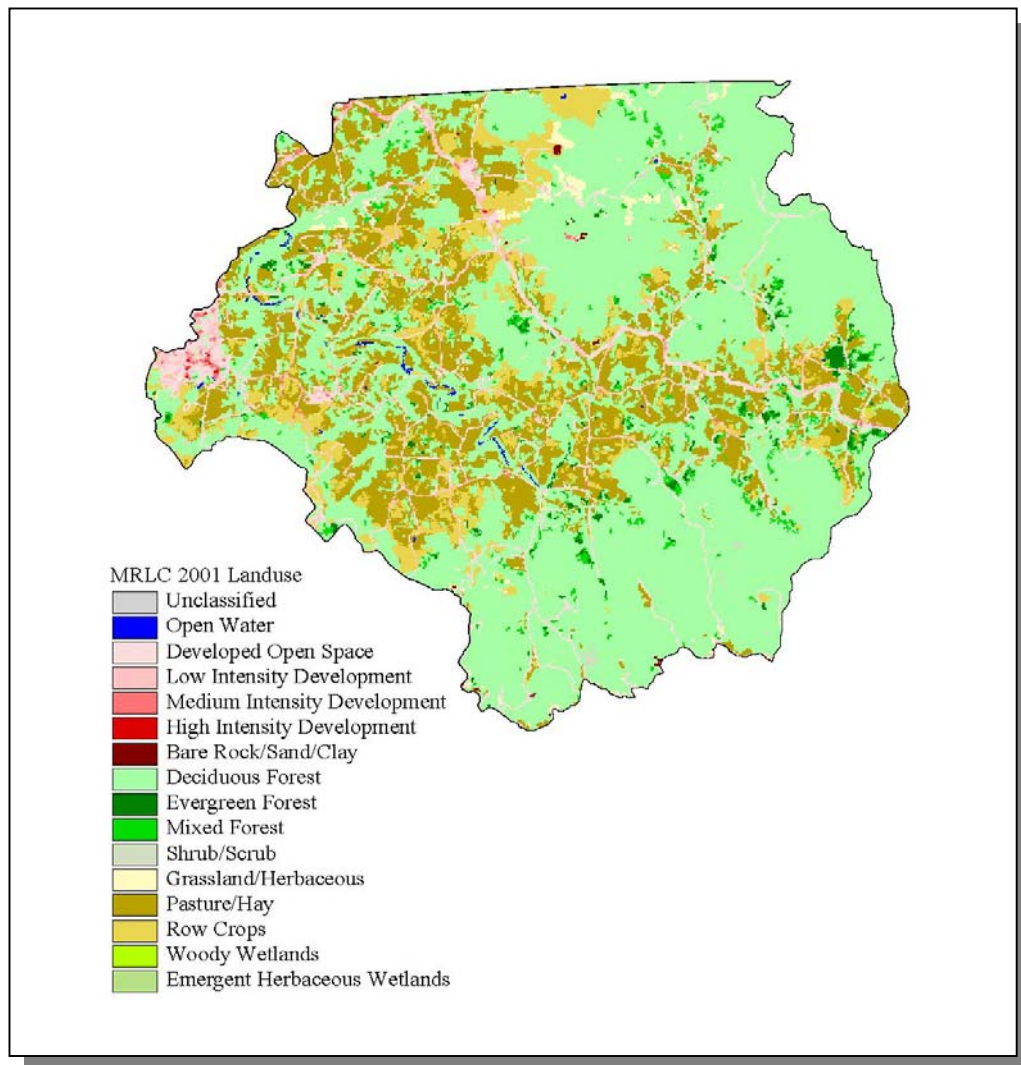
CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.89
Grass (Hayland)	0.11
Legumes, Grass (Hayland)	0.34
Grass, Forbs, Legumes (Mixed Pasture)	0.46
Corn (Row Crops)	16.18
Soybeans (Row Crops)	6.00
Wheat (Close-Grown Cropland)	43.40
Tobacco (Row Crops)	23.18
Other Vegetable and Truck Crops	15.94
Farmsteads and Ranch Headquarters	3.57

**Table 4-105. Annual Estimated Total Soil Loss in Subwatershed 051301050402.**

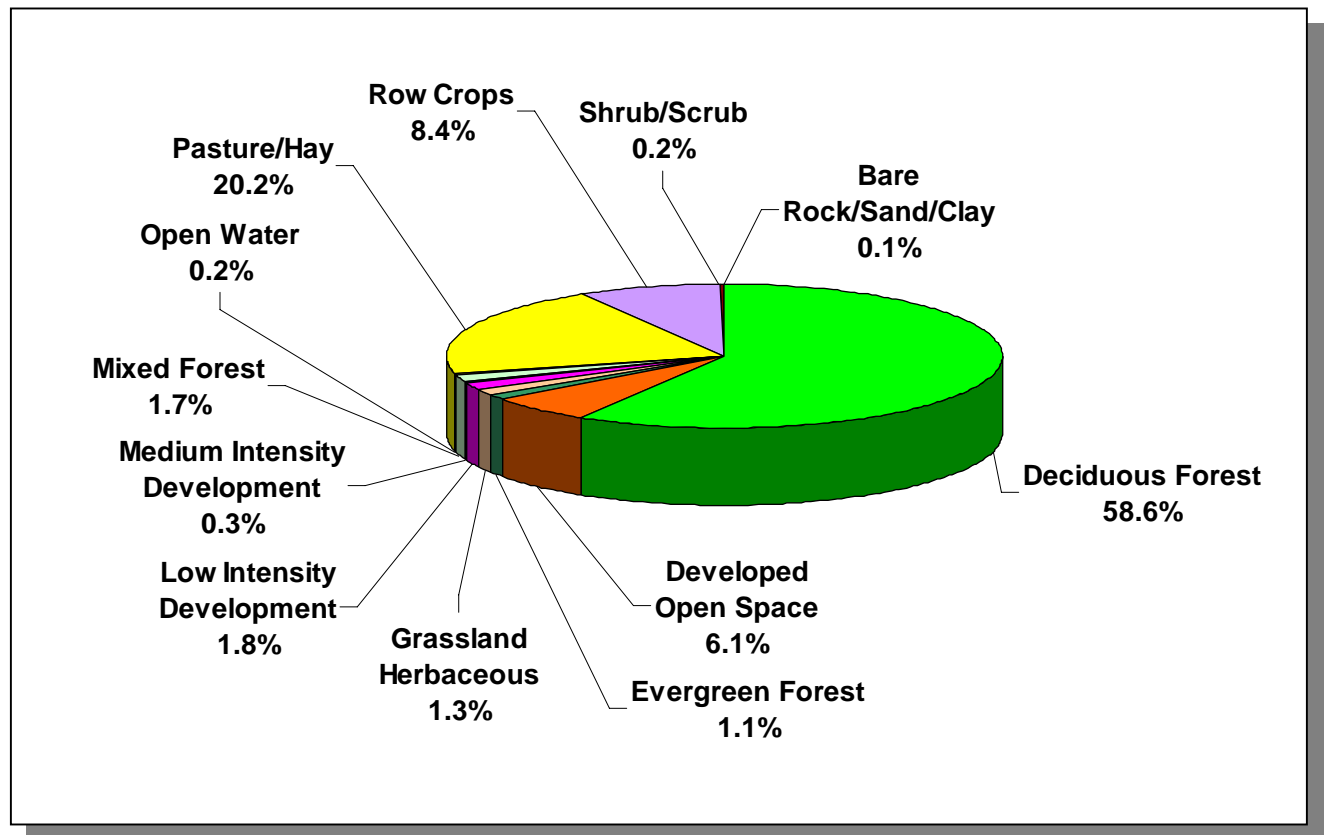
**4.2.D.iii. 051301050403 (Wolf River).**



**Figure 4-117. Location of Subwatershed 051301050403.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.

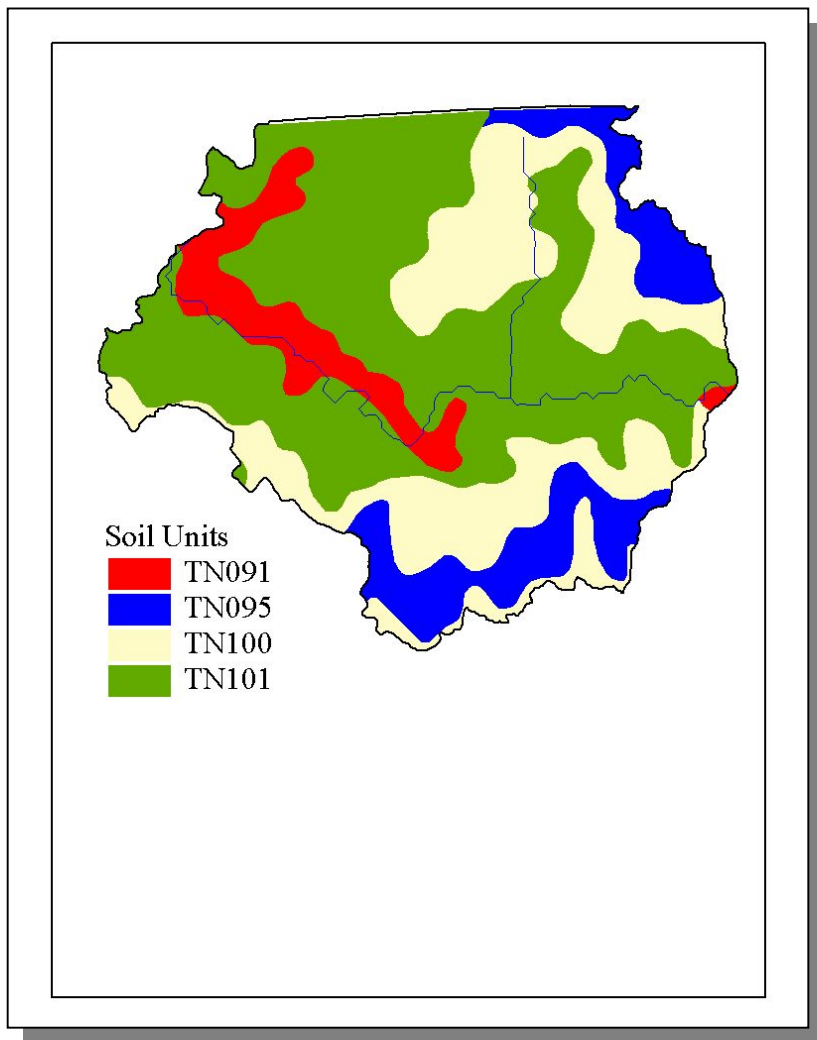


**Figure 4-118. Illustration of Land Use Distribution in Subwatershed 051301050403.**



**Figure 4-119. Land Use Distribution in Subwatershed 051301050403.** More information is provided in Appendix IV.





**Figure 4-120. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050403.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN091	0.00	B	2.95	5.86	Loam	0.34
TN095	0.00	B	2.35	5.12	Loam	0.31
TN100	0.00	B	1.14	3.35	Silty Loam	0.21
TN101	0.00	B	1.71	5.39	Loam	0.35

**Table 4-106. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050403.** The definition of "Hydrologic Group" is provided in Appendix IV.

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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Fentress	14,669	15,920	16,625	4.65	683	741	774	13.3
Pickett	4,548	4,631	4,945	24.52	1,115	1,136	1,213	8.8
<b>Total</b>	<b>19,217</b>	<b>20,551</b>	<b>21,570</b>		<b>1,798</b>	<b>1,877</b>	<b>1,987</b>	<b>10.5</b>

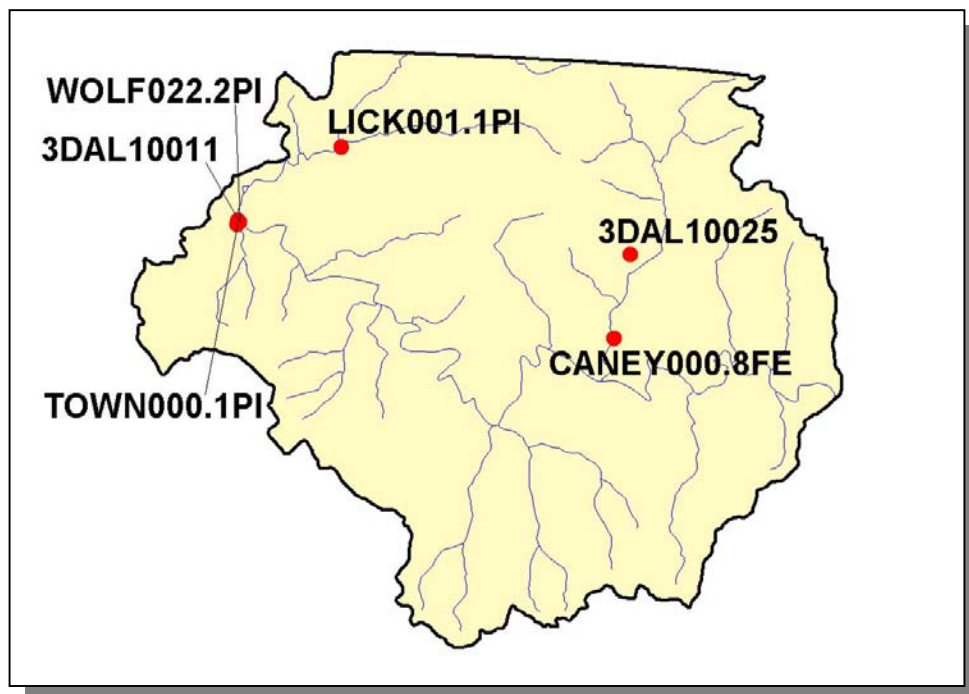
*Table 4-107. Population Estimates in Subwatershed 051301050403.*

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Byrdstown	Pickett	998	429	308	115	6

*Table 4-108. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051301050403.*

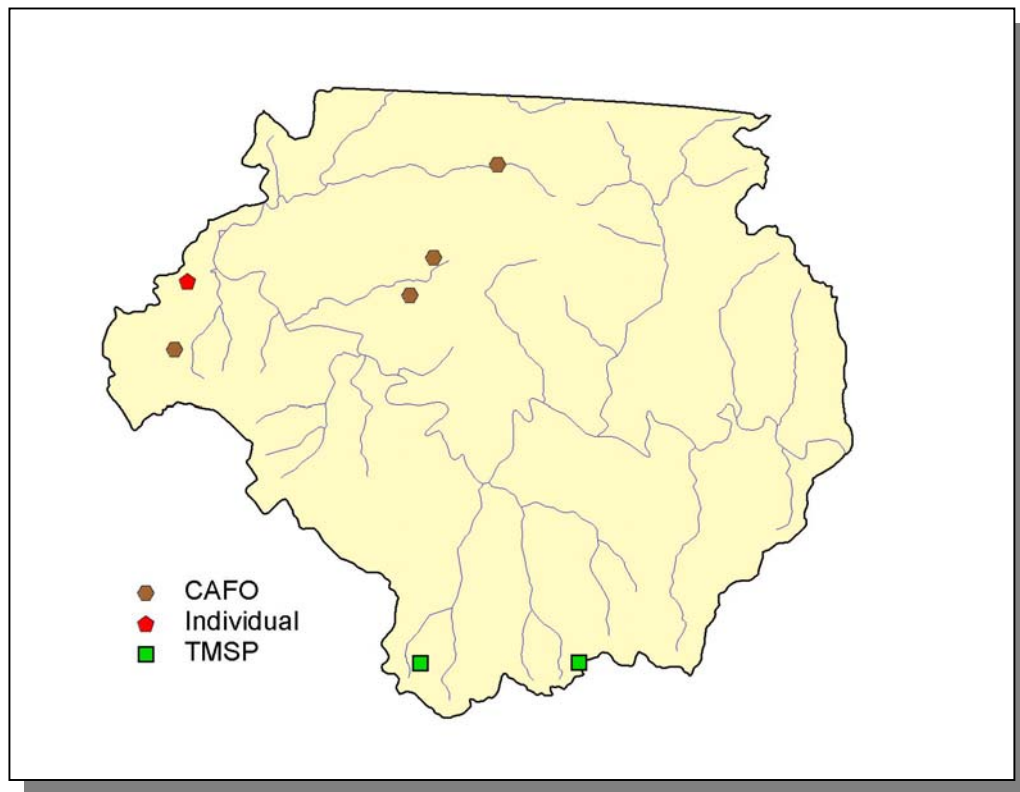


**Figure 4-121. Location of Historical Streamflow Data Collection Sites in Subwatershed 051301050403.** More information is provided in Appendix IV.

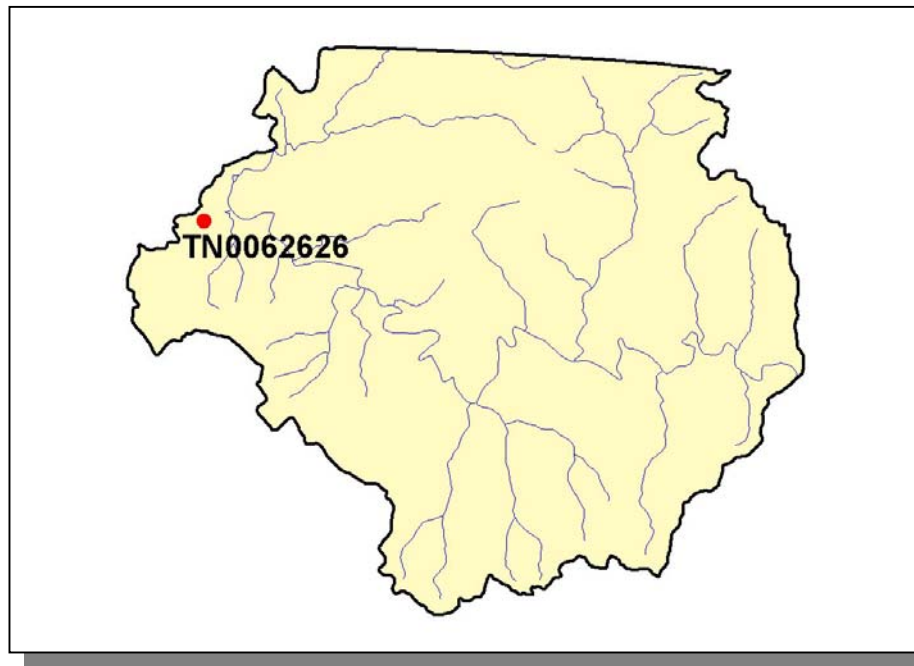


**Figure 4-122. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050403.** More information, including site names and locations, is provided in Appendix IV.

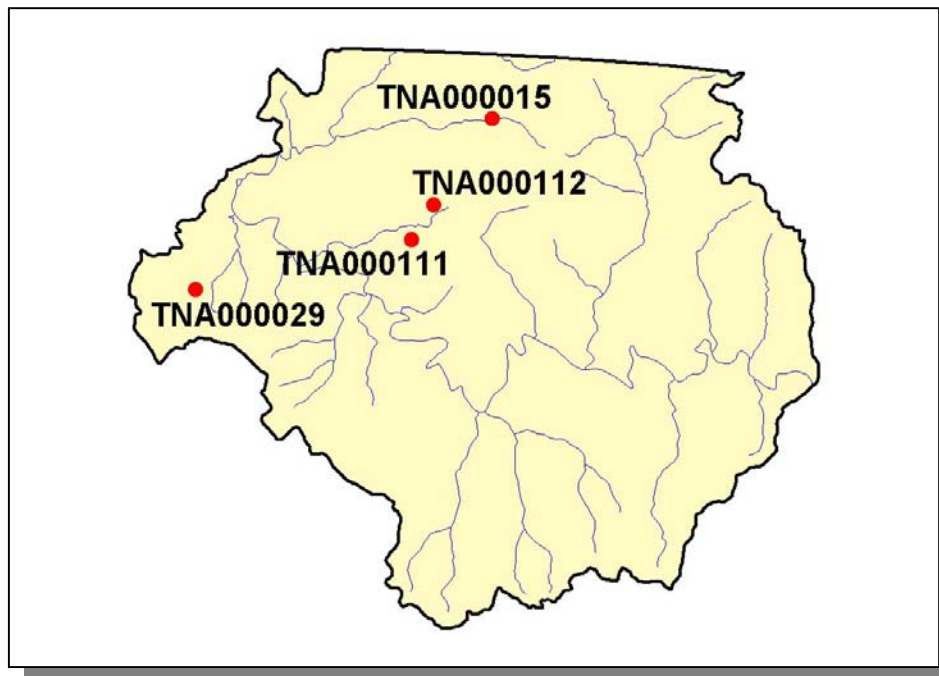
**4.2.D.iii.a. Point Source Contributions.**



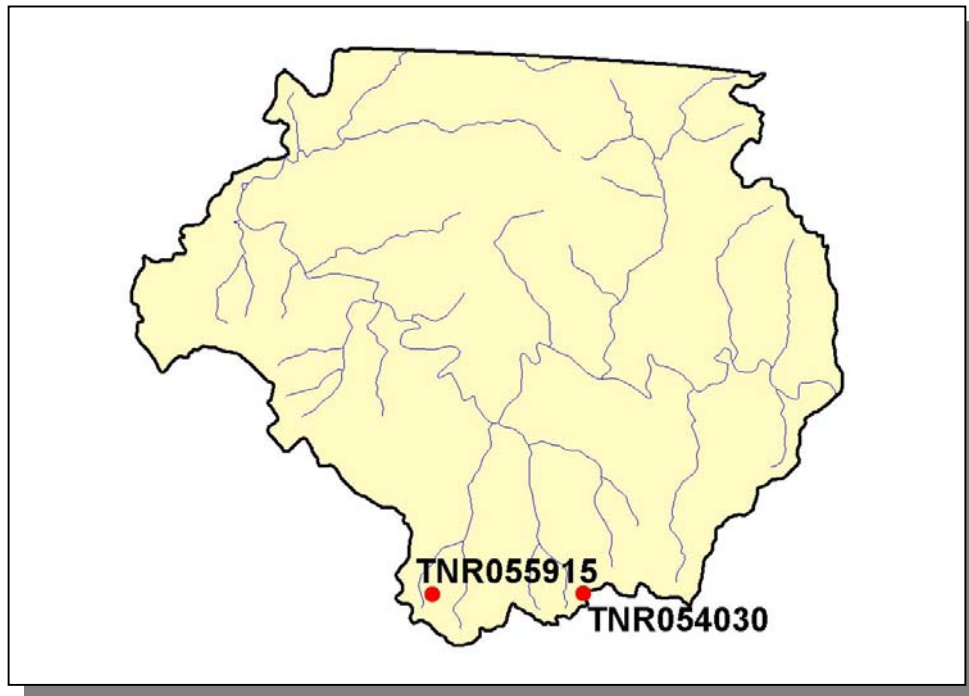
**Figure 4-123. Location of Permits Issued in Subwatershed 051301050403.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-124. Location of Active NPDES Sites in Subwatershed 051301050403.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-125. Location of Concentrated Animal Feeding Operation (CAFO) in Subwatershed 051301050403.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-126. Location of TMSP Sites in Subwatershed 051301050403.** More information, including the names of facilities, is provided in Appendix IV.

**4.2.D.iii.a.i Dischargers to Water Bodies Listed on the 2004 303(d) List**

There is one NPDES facility discharging to water bodies listed on the 2004 303(d) list in Subwatershed 051301050403:

- TN0062626 (Byrdstown STP) discharges to an unnamed tributary @ RM 0.4 to Town Creek @ RM 0.1



**Figure 4-127. Location of NPDES Dischargers to Water Bodies Listed on the 2004 303(d) List in Subwatershed 051301050403.** More information, including the names of facilities, is provided in Appendix IV.

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PERMIT #	1Q10	3Q10	7Q10	3Q20	QDESIGN
TN0062626			0		

**Table 4-109. Receiving Stream Flow Information for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051301050403.** Data are in million gallons per day (MGD). Data were obtained from the USGS publication Flow Duration and Low Flows of Tennessee Streams Through 1992 or from permit files.

PERMIT #	P	FLOW
TN0062626	X	X

**Table 4-110. Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051301050403.**

PERMIT #	WET	NH <sub>3</sub>	N	Hg	TRC	TSS	SETTLEABLE SOLIDS	CN	DO	pH
TN0062626	X	X	X	X	X	X	X	X	X	X

**Table 4-111. Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051301050403.** WET, Whole Effluent Toxicity; CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen Demand (5-Day); TRC, Total Residual Chlorine; TSS, Total Suspended Solids.

PERMIT #	E. coli	FECAL COLIFORM
TN0062626	X	X

**Table 4-112. Bacteria Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051301050403.**



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**4.2.D.iii.b. Nonpoint Source Contributions.**

<b>LIVESTOCK (COUNTS)</b>						
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
3,454	6,445	38	7	489,726	97	5

**Table 4-113. Summary of Livestock Count Estimates in Subwatershed 051301050403.**

According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

<b>LIVESTOCK COUNTS</b>							
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Chickens (Broilers Sold)	Hogs	Sheep
Fentress	8,058	17,259	430	474	7,290,026	729	79
Pickett	5,986	10,864	19	284	0	99	0

**Table 4-114. Summary of Livestock Count Estimates in Fentress, Overton, and Putnam Counties.**

According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older; "Chickens Sold" are all chickens used to produce meat.

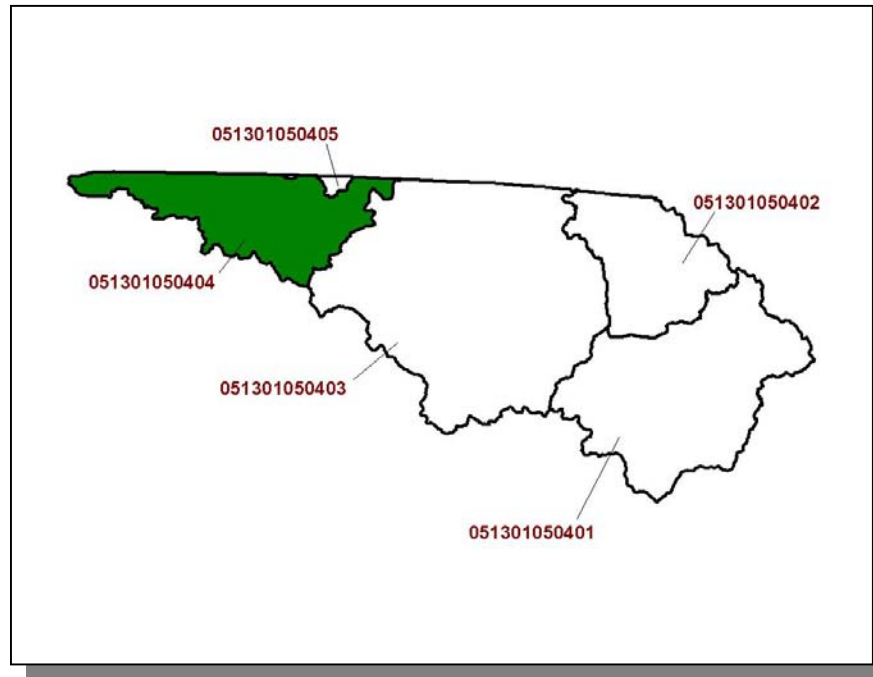
County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Fentress	244.1	244.1	3.6	14.3
Pickett	68.4	68.4	0.2	0.6

**Table 4-115. Forest Acreage and Annual Removal Rates (1987-1994) in Fentress and Pickett Counties.**

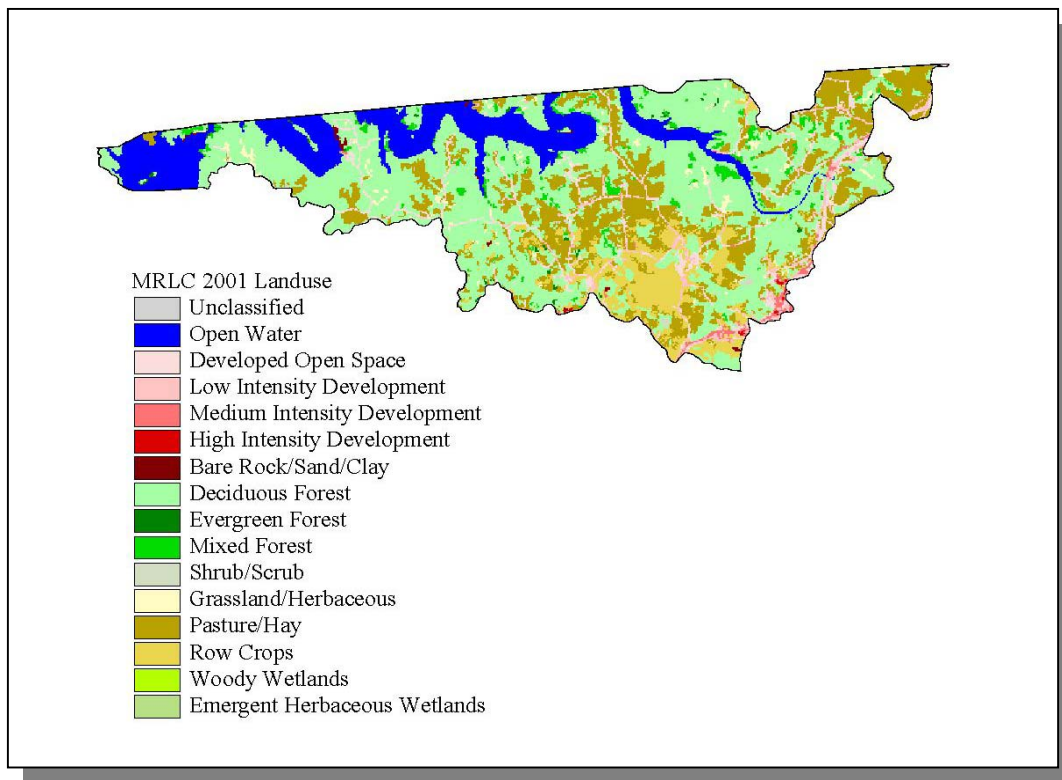
<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Grass (Pastureland)	0.97
Grass (Hayland)	0.11
Legumes, Grass (Hayland)	0.23
Grass, Forbs, Legumes (Mixed Pasture)	0.56
Corn (Row Crops)	16.18
Soybeans (Row Crops)	5.99
Tobacco (Row Crops)	23.18
Wheat (Close-Grown Cropland)	43.40
Other Vegetable and Truck Crops	15.94
Farmsteads and Ranch Headquarters	5.05

**Table 4-116. Annual Estimated Total Soil Loss in Subwatershed 051301050403.**

**4.2.D.iv. 051301050404 (Dale Hollow Lake).**

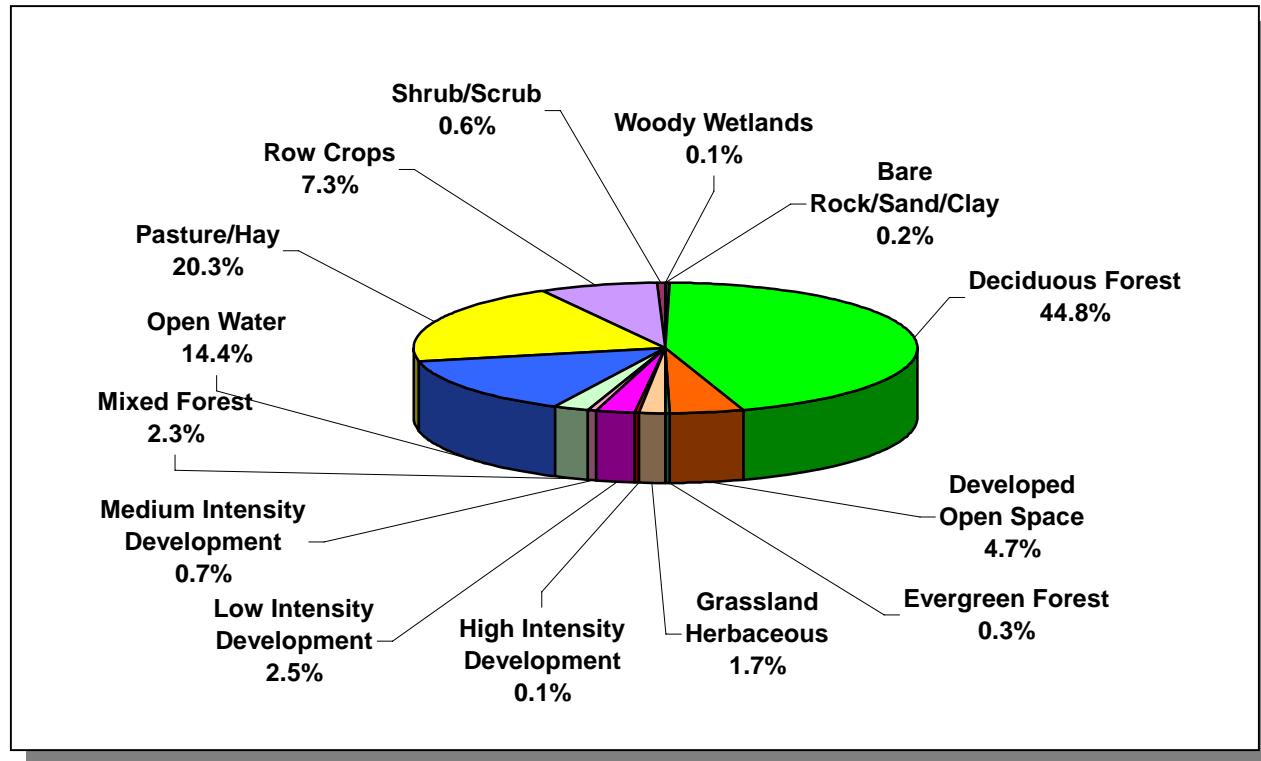


**Figure 4-128. Location of Subwatershed 051301050404.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.

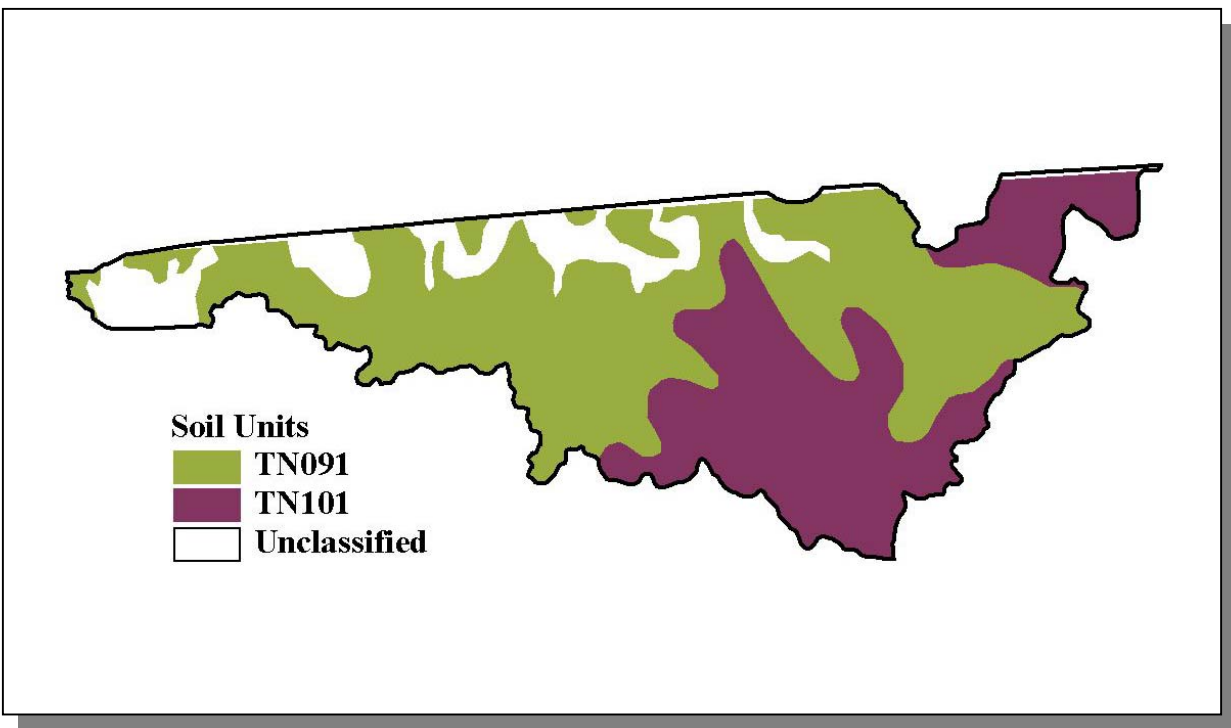


**Figure 4-129. Illustration of Land Use Distribution in Subwatershed 051301050404.**

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**Figure 4-130. Land Use Distribution in Subwatershed 051301050404.** More information is provided in Appendix IV.



**Figure 4-131. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050404.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN091	0.00	B	2.95	5.86	Loam	0.34
TN101	0.00	B	1.71	5.39	Loam	0.35

**Table 4-117. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050404.** The definition of "Hydrologic Group" is provided in Appendix IV.

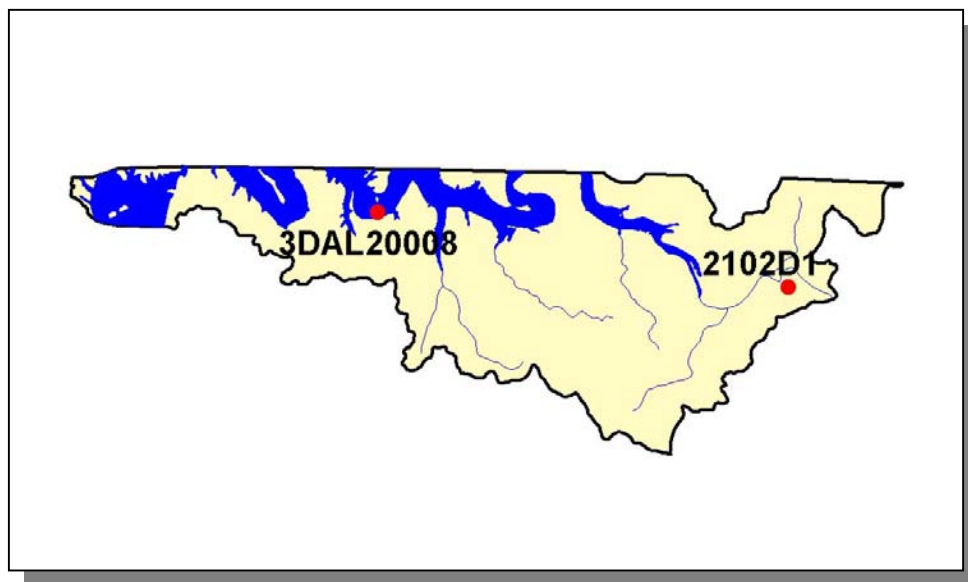
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Clay	7,238	7,311	7,976	0.5	36	37	40	11.1
Pickett	4,548	4,631	4,945	12.36	562	572	611	8.7
<b>Total</b>	<b>11,786</b>	<b>11,942</b>	<b>12,921</b>		<b>598</b>	<b>609</b>	<b>651</b>	<b>8.9</b>

*Table 4-118. Population Estimates in Subwatershed 051301050404.*

			NUMBER OF HOUSING UNITS			
Populated Place	County	Population	Total	Public Sewer	Septic Tank	Other
Byrdstown	Pickett	998	429	308	115	6

*Table 4-119. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051301050404.*



*Figure 4-132. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050404. More information, including site names and locations, is provided in Appendix IV.*

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**4.2.D.iv.a. Point Source Contributions.**

There are no known point sources in this subwatershed.

**4.2.D.iv.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS				
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs
1,035	1,884	<5	<5	17

**Table 4-120. Summary of Livestock Count Estimates in Subwatershed 051301050404.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Clay	0	14,574	0	18	174	23
Pickett	5,986	10,864	19	285	99	0

**Table 4-121. Summary of Livestock Count Estimates in Clay and Pickett Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

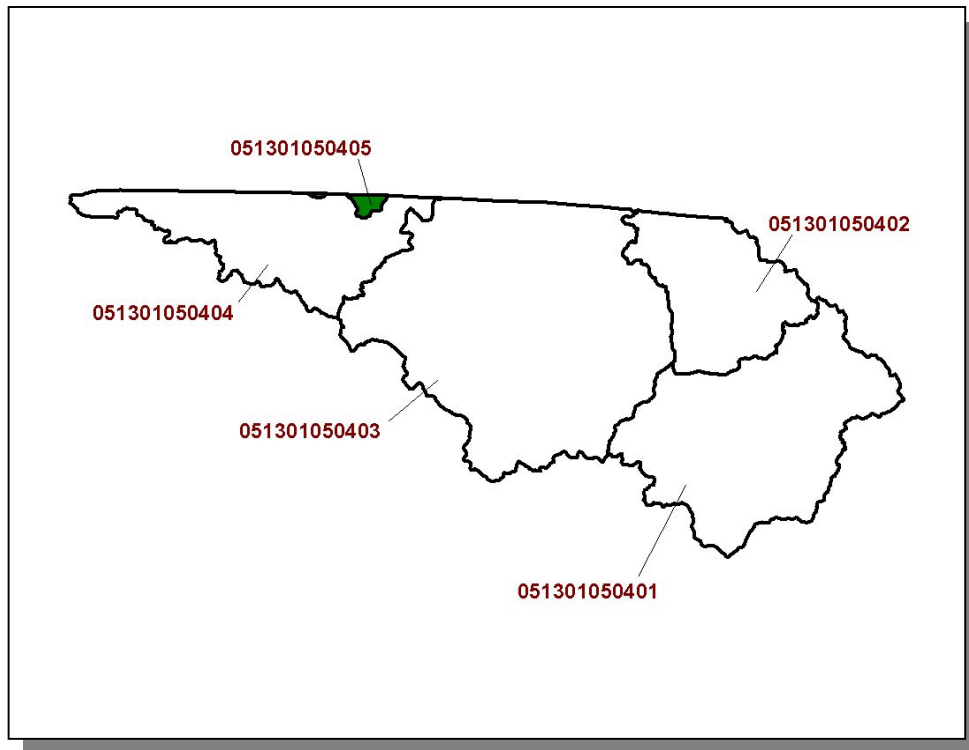
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Clay	105.1	105.1	2.3	10.1
Pickett	68.4	68.4	0.2	0.6

**Table 4-122. Forest Acreage and Annual Removal Rates (1987-1994) in Clay and Pickett Counties.**

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	1.10
Grass (Hayland)	0.13
Legumes, Grass (Hayland)	0.09
Grass, Forbs, Legumes (Mixed Pasture)	0.74
Tobacco (Row Crops)	23.47
Farmsteads and Ranch Headquarters	7.09

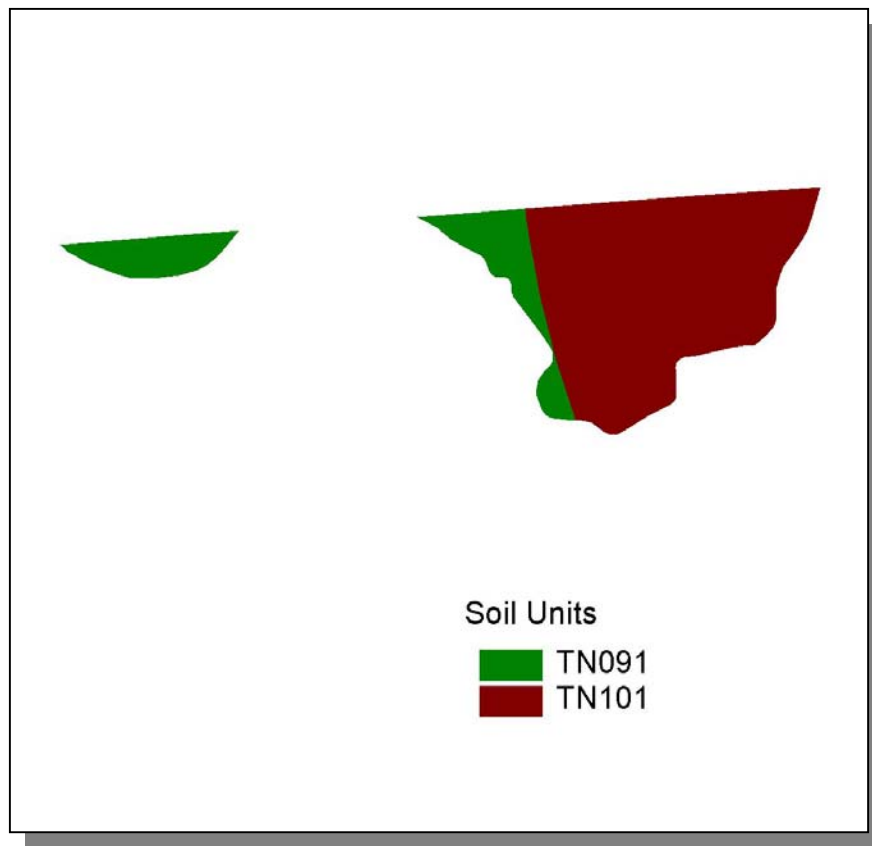
**Table 4-123. Annual Estimated Total Soil Loss in Subwatershed 051301050404.**

**4.2.D.v. 051301050405 (Spring Creek).**



**Figure 4-133. Location of Subwatershed 051301050405.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.





**Figure 4-134. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050405.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN091	0.00	B	2.95	5.86	Loam	0.34
TN101	0.00	B	1.71	5.39	Loam	0.35

**Table 4-124. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050405.** The definition of “Hydrologic Group” is provided in Appendix IV.

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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Pickett	4,548	4,631	4,945	0.03	>5	>5	>5	NA

**Table 4-125. Population Estimates in Subwatershed 051301050405.** NA, Not applicable.

**4.2.D.v.a. Point Source Contributions.**

There are no point source contributions in this subwatershed.

**4.2.D.v.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS		
Beef Cow	Cattle	Hogs
90	163	<5

**Table 4-126. Summary of Livestock Count Estimates in Subwatershed 051301050405.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

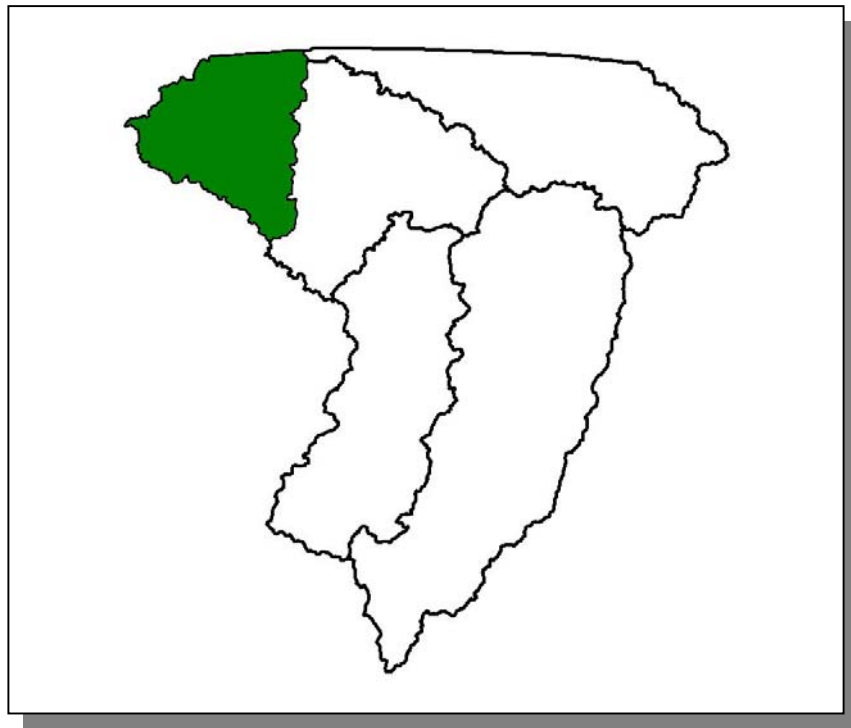
LIVESTOCK COUNTS					
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs
Pickett	5,986	10,864	19	285	99

**Table 4-127. Summary of Livestock Count Estimates in Pickett County.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Pickett	68.4	68.4	0.2	0.6

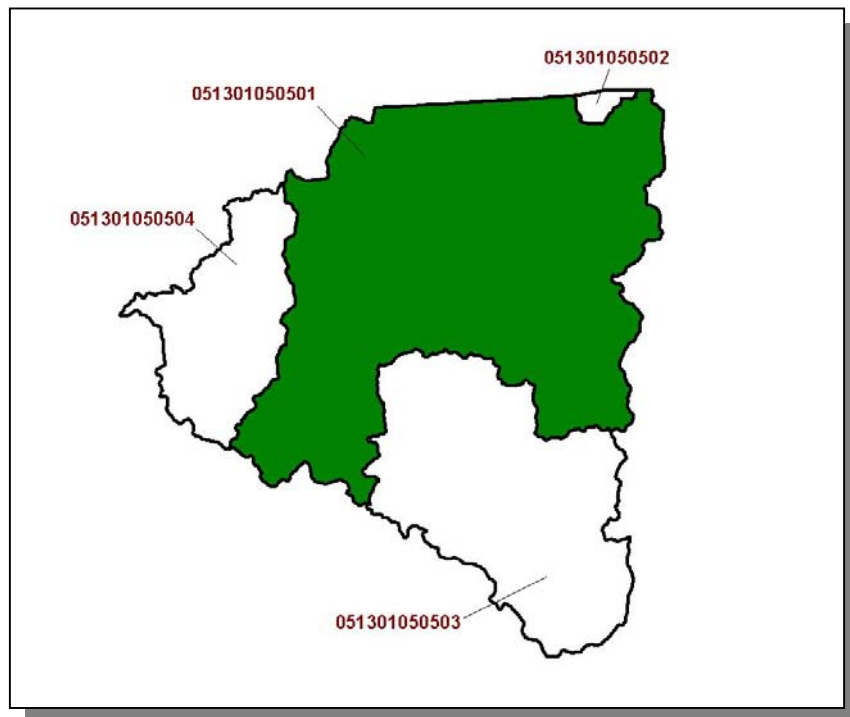
**Table 4-128. Forest Acreage and Annual Removal Rates (1987-1994) in Pickett County.**

**4.2.E. 0513010505.**

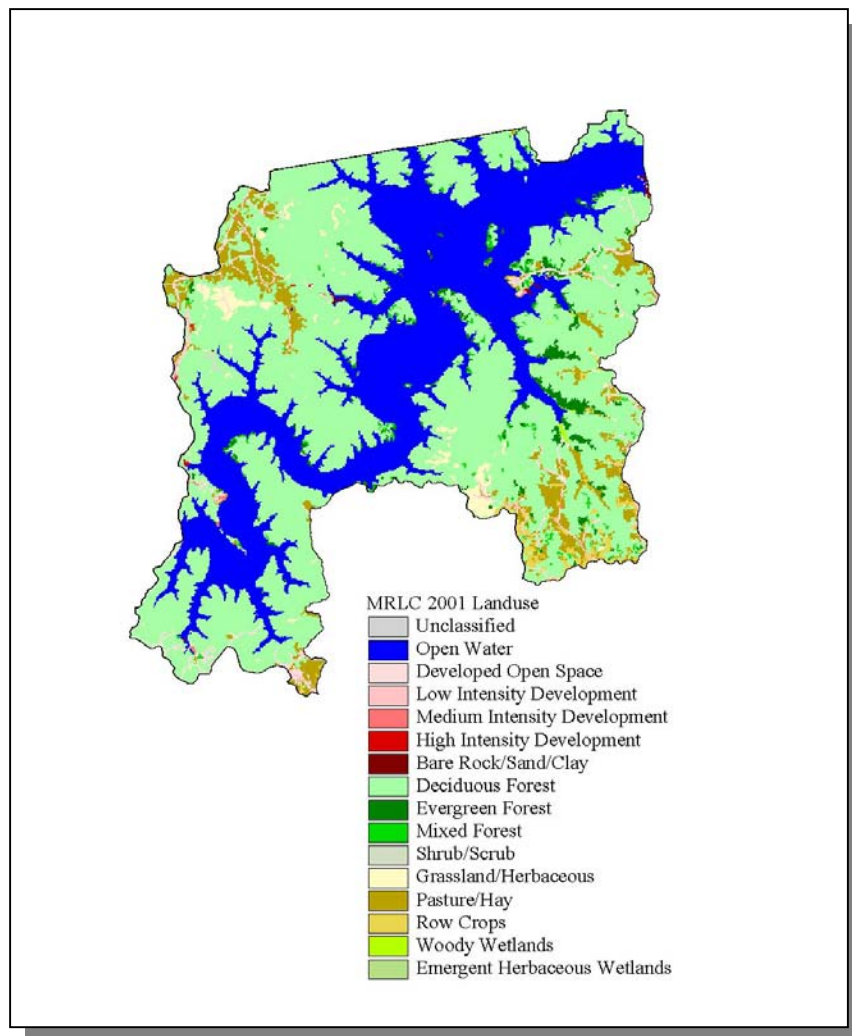


**Figure 4-135. Location of Subwatershed 0513010505.** All Obey River HUC-10 subwatershed in Tennessee boundaries are shown for reference.

**4.2.E.i. 051301050501 (Dale Hollow Lake).**

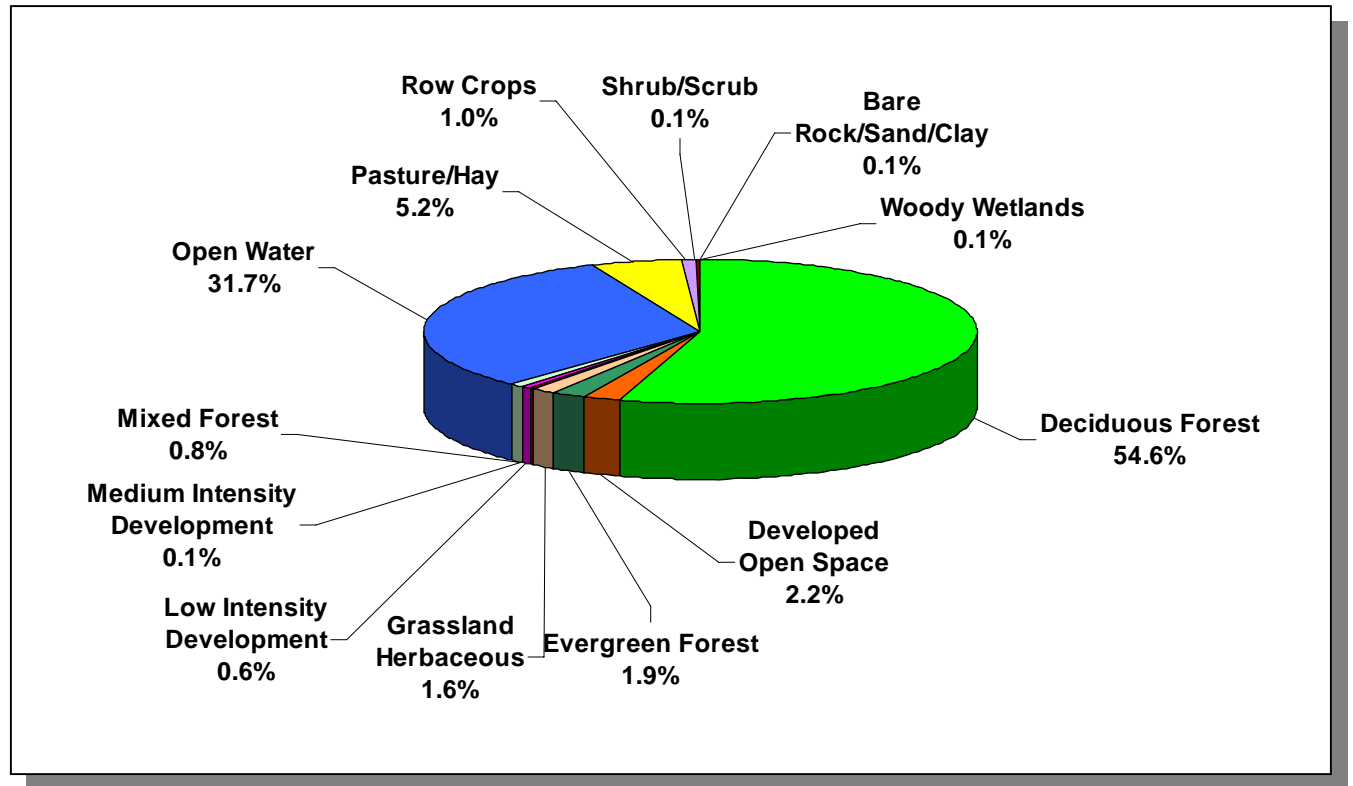


**Figure 4-136. Location of Subwatershed 051301050501.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.

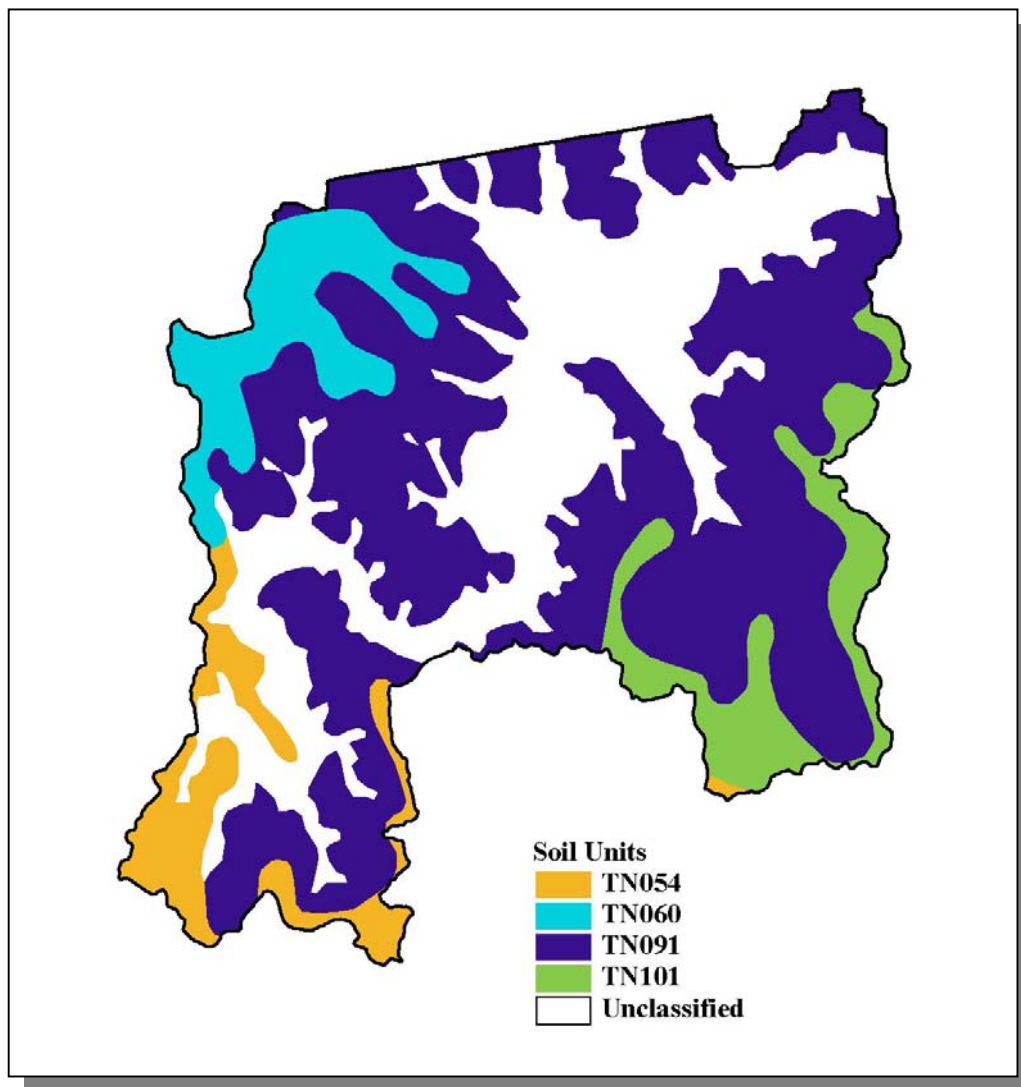


**Figure 4-137. Illustration of Land Use Distribution in Subwatershed 051301050501.**

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**Figure 4-138. Land Use Distribution in Subwatershed 051301050501.** More information is provided in Appendix IV.



**Figure 4-139. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050501.**

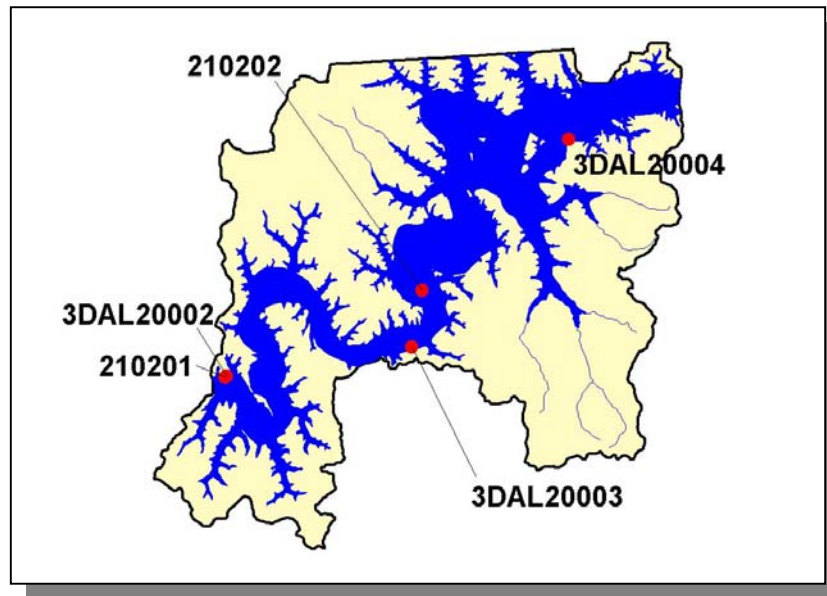
STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN060	5.00	B	1.30	5.32	Silty Loam	0.39
TN091	0.00	B	2.95	5.86	Loam	0.34
TN101	0.00	B	1.71	5.39	Loam	0.35

**Table 4-129. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050501.** The definition of "Hydrologic Group" is provided in Appendix IV.

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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Clay	7,238	7,311	7,976	18.72	1,355	1,369	1,493	10.2
Overton	17,636	19,171	20,118	0.34	59	65	68	15.3
<b>Total</b>	<b>24,874</b>	<b>26,482</b>	<b>28,094</b>		<b>1,414</b>	<b>1,434</b>	<b>1,561</b>	<b>10.4</b>

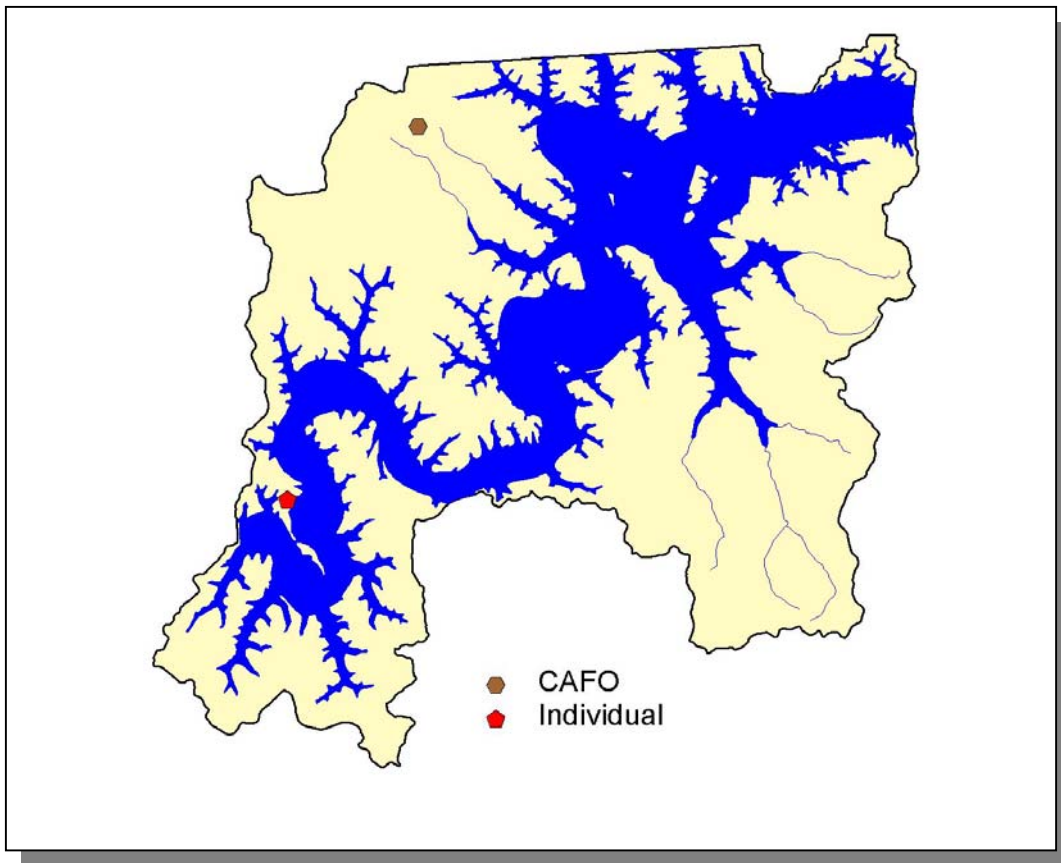
*Table 4-130. Population Estimates in Subwatershed 051301050501.*



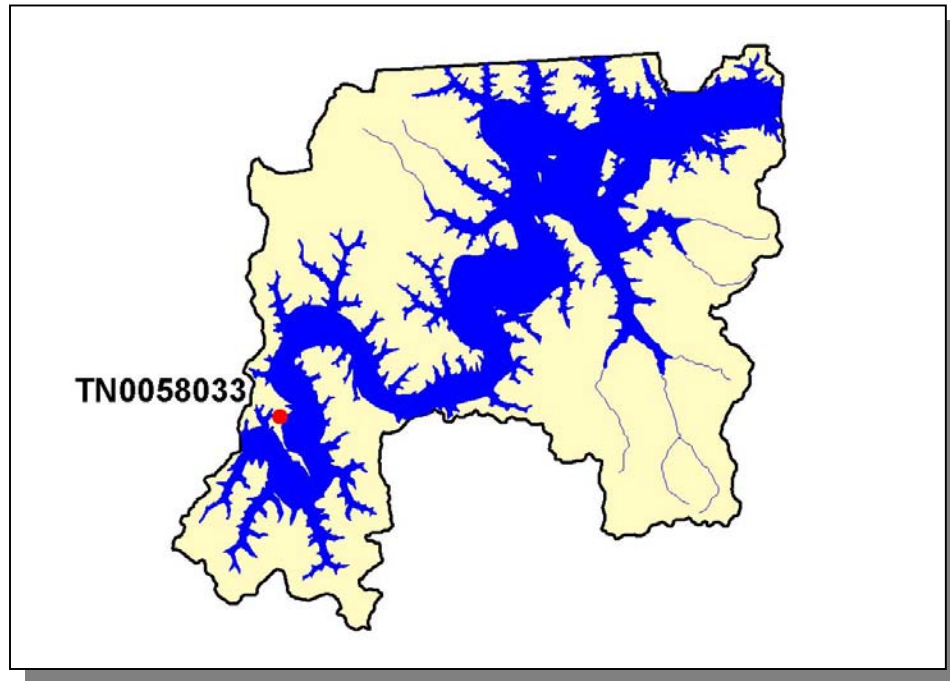
*Figure 4-140. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050501. More information, including site names and locations, is provided in Appendix IV.*



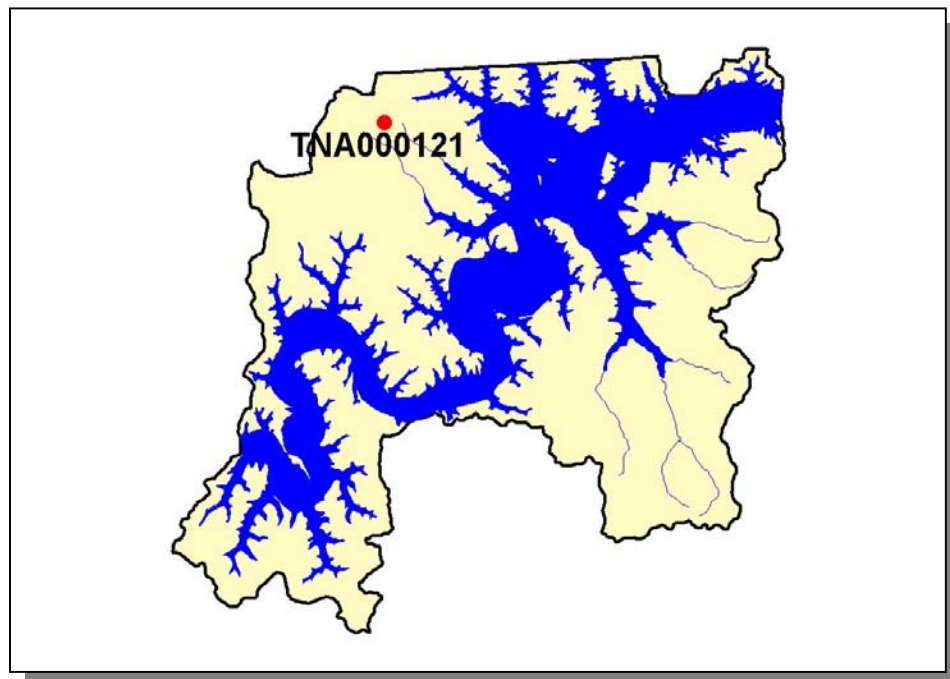
**4.2.E.i.a. Point Source Contributions.**



**Figure 4-141. Location of Permits Issued in Subwatershed 051301050501.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-142. Location of Active NPDES Sites in Subwatershed 051301050501.** More information, including the names of facilities, is provided in Appendix IV.

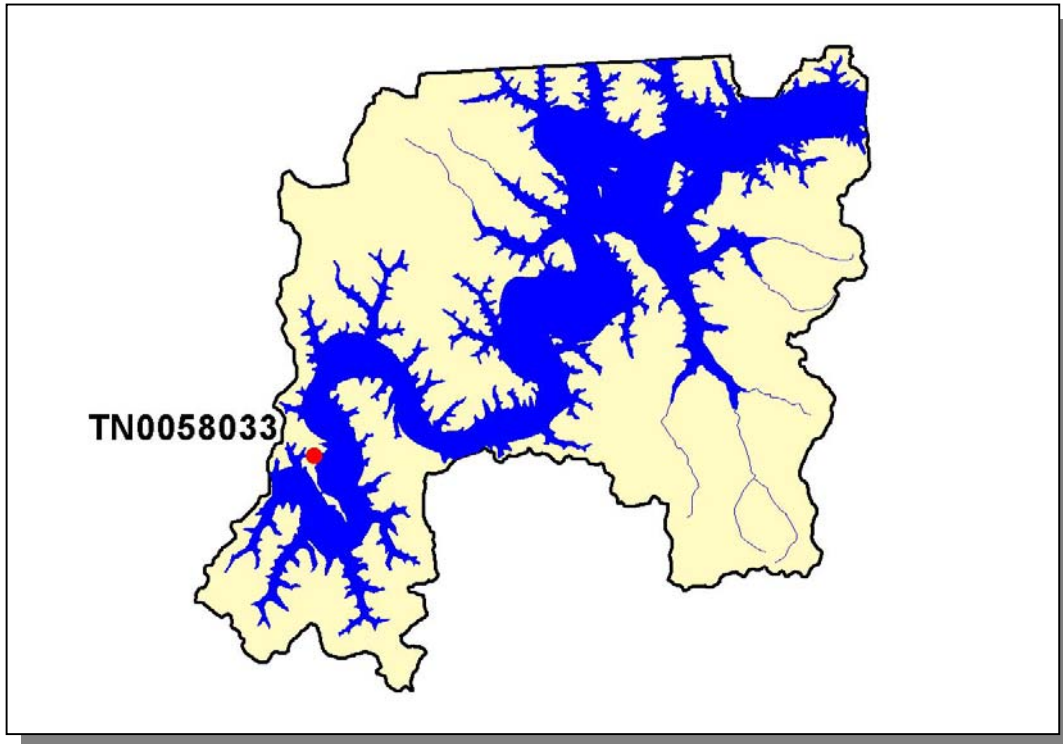


**Figure 4-143. Location of Concentrated Animal Feeding Operation (CAFO) in Subwatershed 051301050501.** More information, including the names of facilities, is provided in Appendix IV.

**4.2.E.i.a.i.** Dischargers to Water Bodies Listed on the 2004 303(d) List

There is one NPDES facility discharging to water bodies listed on the 2004 303(d) list in Subwatershed 051301050501:

- TN0058033 (Cedar Hill Resort) discharges to Obey River @ RM 10.3



**Figure 4-144. Location of NPDES Dischargers to Water Bodies Listed on the 2004 303(d) List in Subwatershed 051301050501.** More information, including the names of facilities, is provided in Appendix IV.

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PERMIT #	1Q10	3Q10	7Q10	3Q20	QDESIGN
TN0058033					

**Table 4-131. Receiving Stream Flow Information for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051301050501.** Data are in million gallons per day (MGD). Data were obtained from the USGS publication Flow Duration and Low Flows of Tennessee Streams Through 1992 or from permit files.

PERMIT #	FLOW
TN0058033	X

**Table 4-132. Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051301050501.**

PERMIT #	CBOD <sub>5</sub>	NH <sub>3</sub>	TRC	TSS	SETTLEABLE SOLIDS	DO	pH
TN0058033	X		X	X	X	X	X

**Table 4-133. Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051301050501.** CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen Demand (5-Day); TRC, Total Residual Chlorine; TSS, Total Suspended Solids.

PERMIT #	<i>E. coli</i>
TN0058033	X

**Table 4-134. Bacteria Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051301050501.**

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**4.2.E.i.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
67	2,495	5	<5	32	<5

**Table 4-135. Summary of Livestock Count Estimates in Subwatershed 051301050501.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Clay	0	14,574	0	18	174	23
Overton	15,150	27,812	1,200	1,173	811	59

**Table 4-136. Summary of Livestock Count Estimates in Clay and Overton Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

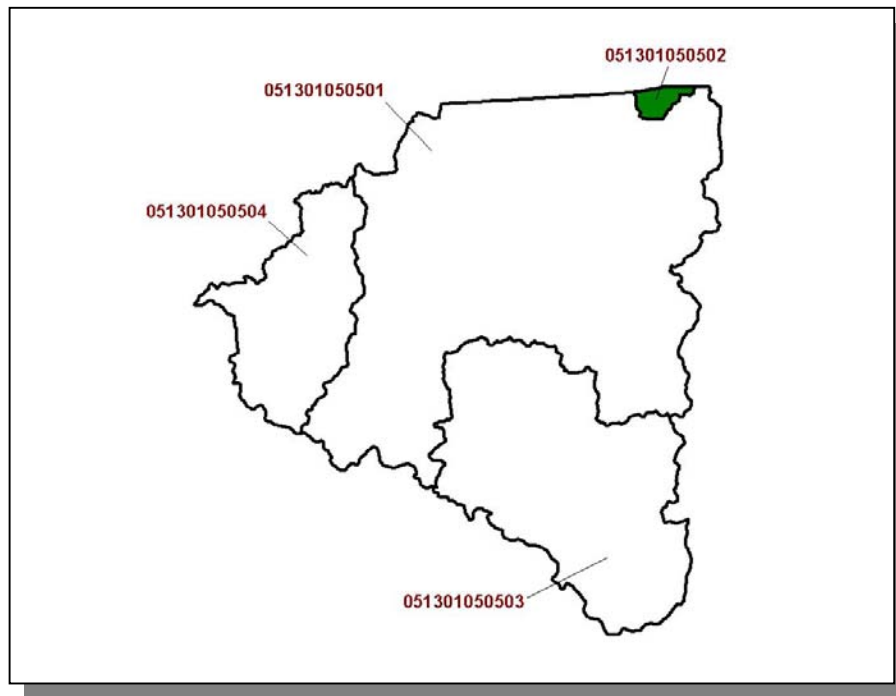
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Clay	105.1	105.1	2.3	10.1
Overton	170.3	170.3	1.7	7.0

**Table 4-137. Forest Acreage and Annual Removal Rates (1987-1994) in Clay and Overton Counties.**

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	1.11
Grass (Hayland)	0.39
Legumes, Grass (Hayland)	0.59
Grass, Forbs, Legumes (Mixed Pasture)	1.36
Corn (Row Crops)	4.34
Soybeans (Row Crops)	10.79
Tobacco (Row Crops)	28.52
Wheat (Close-Grown Cropland)	7.00
Other Vegetable and Truck Crops	2.46
Conservation Reserve Program Lands	0.46
Farmsteads and Ranch Headquarters	1.53

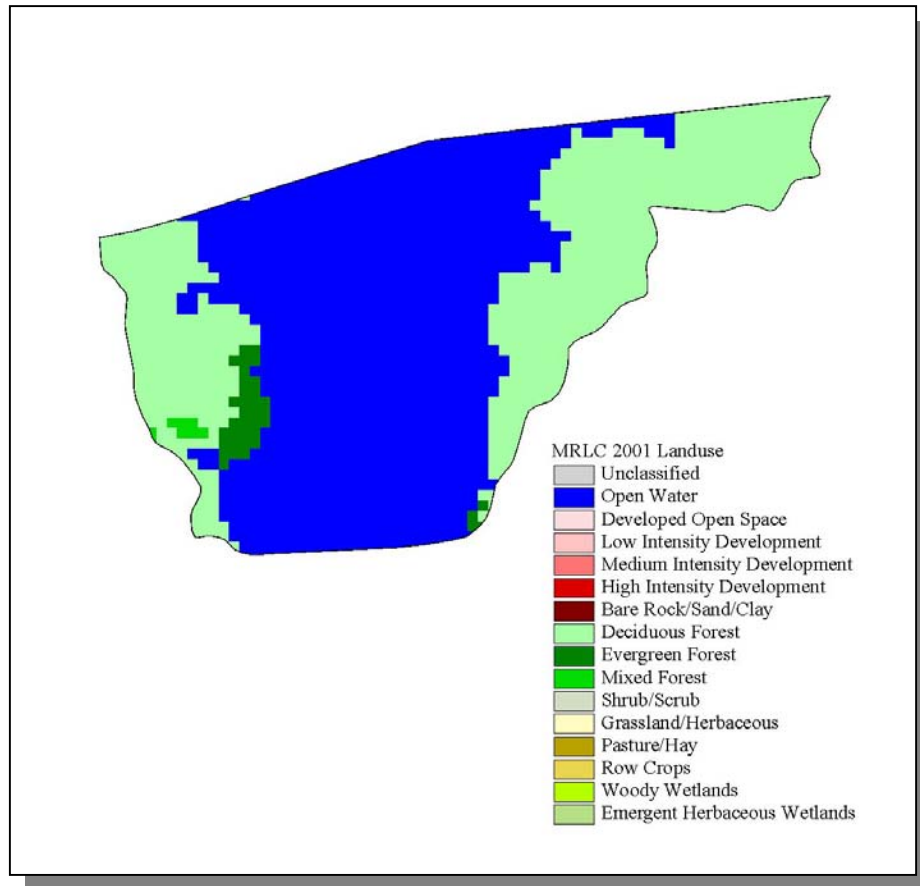
**Table 4-138. Annual Estimated Total Soil Loss in Subwatershed 051301050501.**

**4.2.E.ii.** 051301050502 (Sulphur Creek).

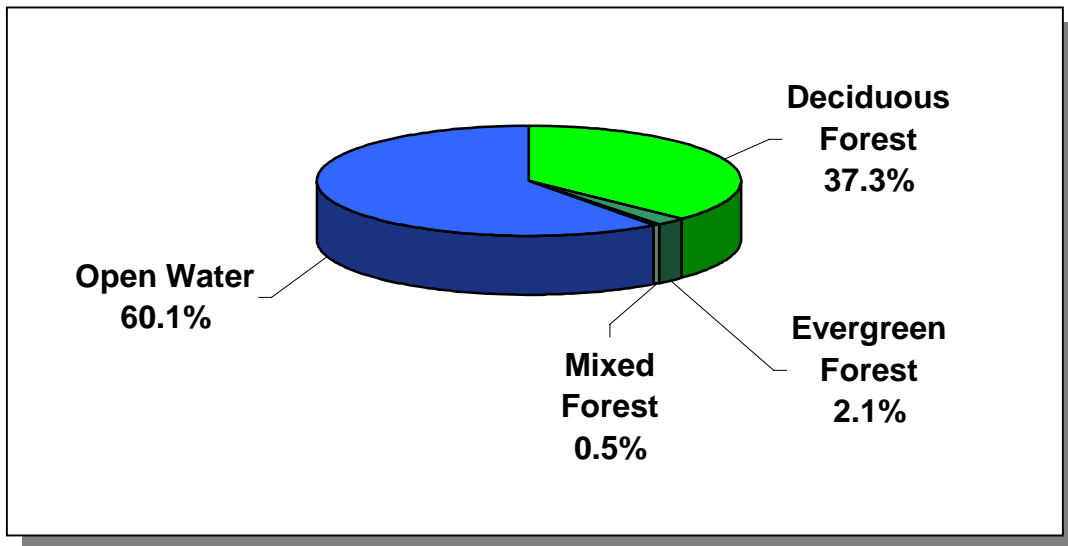


**Figure 4-145. Location of Subwatershed 051301050502.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.

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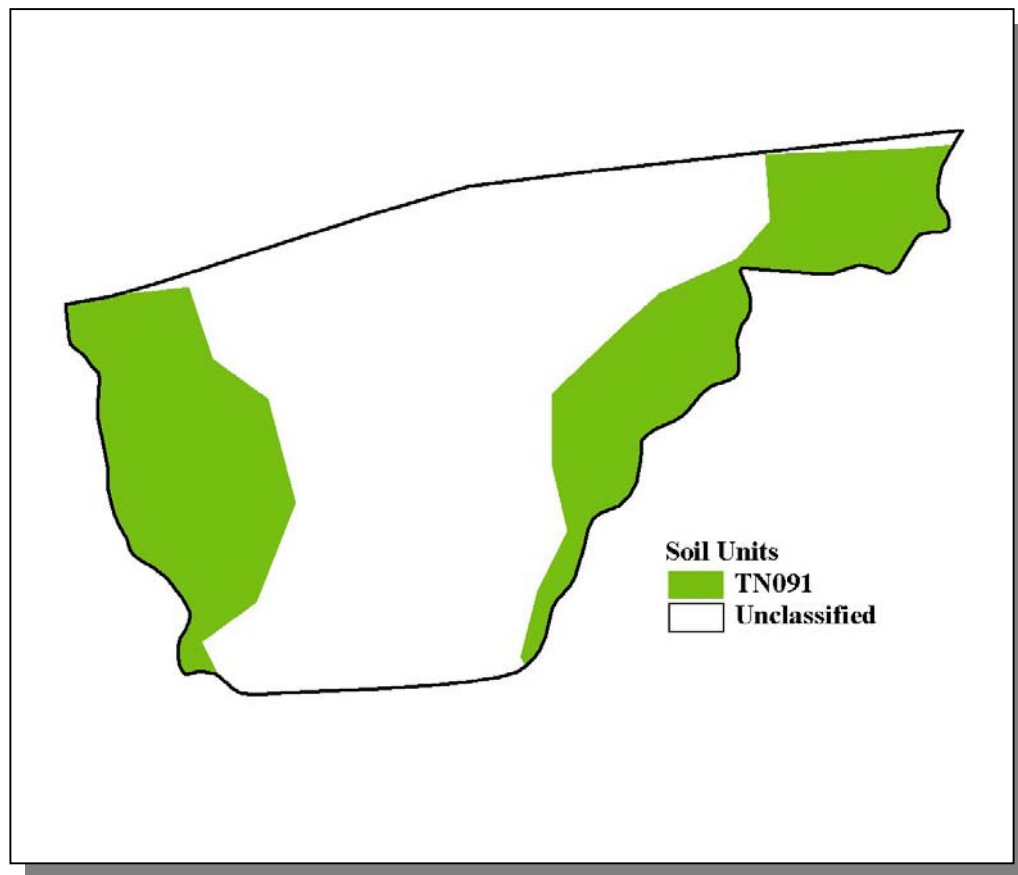
**Figure 4-146. Illustration of Land Use Distribution in Subwatershed 051301050502.**



**Figure 4-147. Land Use Distribution in Subwatershed 051301050502.** More information is provided in Appendix IV.



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**Figure 4-148. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050502.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN091	0.00	B	2.95	5.86	Loam	0.34

**Table 4-139. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050502.** The definition of "Hydrologic Group" is provided in Appendix IV.

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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Clay	7,238	7,311	7,976	0.23	16	17	18	12.5

**Table 4-140. Population Estimates in Subwatershed 051301050502.**

**4.2.E.ii.a. Point Source Contributions.**

There are no point source contributions in this subwatershed.

**4.2.E.ii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS				
County	Cattle	Chickens (Layers)	Hogs	Sheep
Clay	14,574	18	174	23

**Table 4-141. Summary of Livestock Count Estimates in Clay County.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

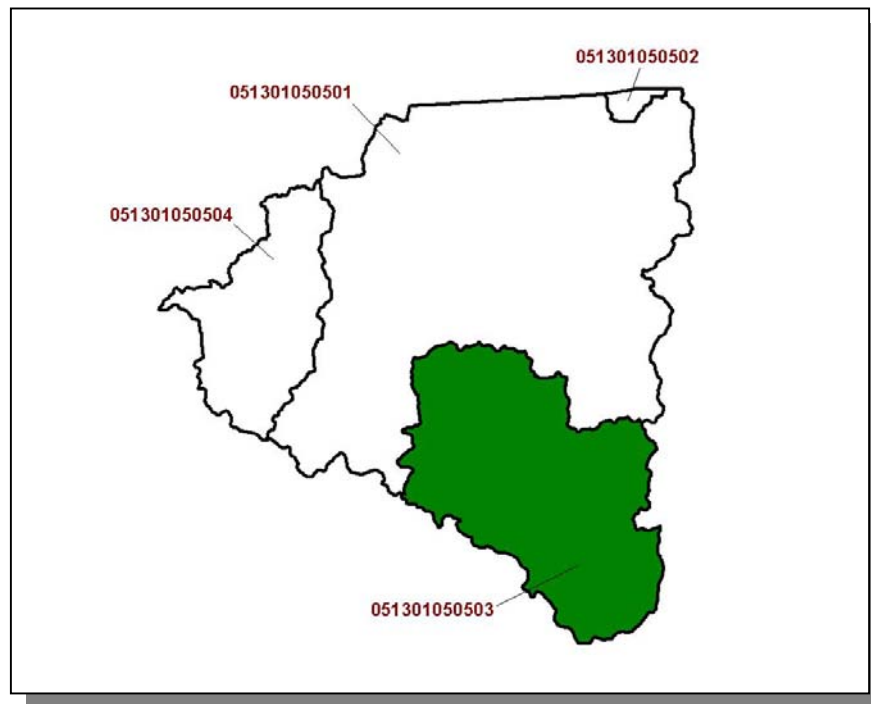
County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Clay	105.1	105.1	2.3	10.1

**Table 4-142. Forest Acreage and Annual Removal Rates (1987-1994) in Clay County.**

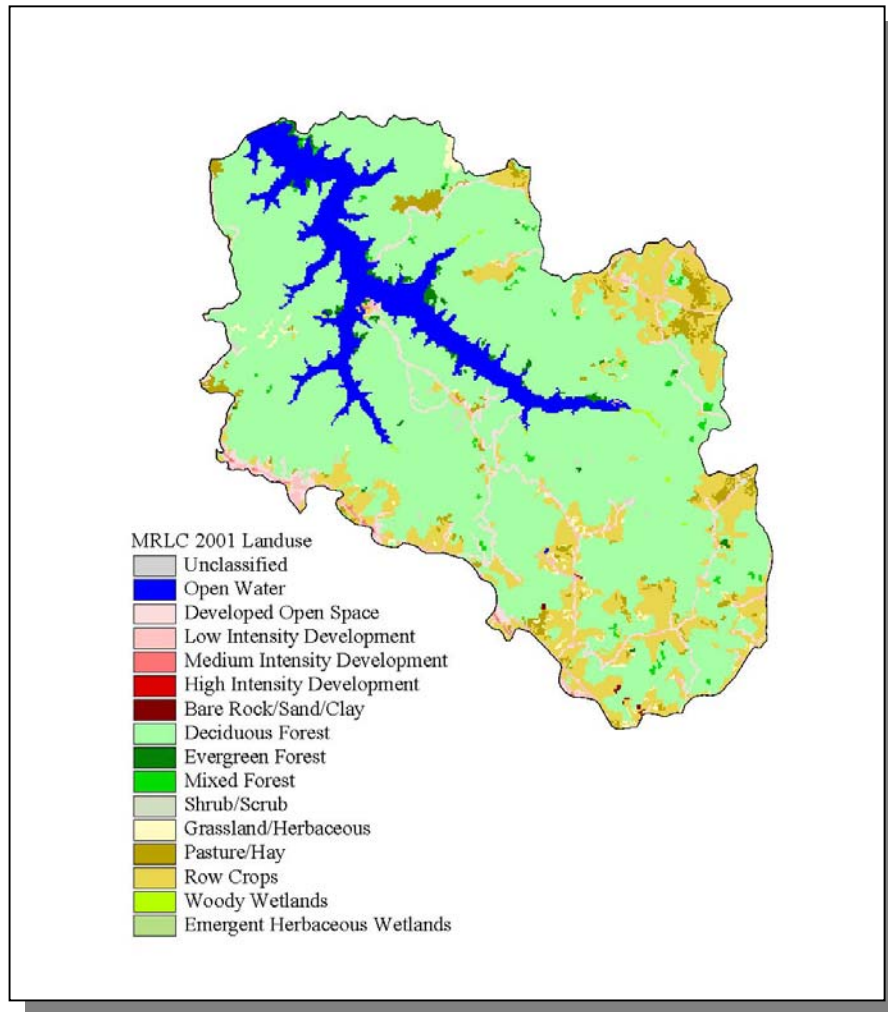
CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	1.14
Grass (Hayland)	0.40
Legumes, Grass (Hayland)	0.53
Grass, Forbs, Legumes (Mixed Pasture)	1.38
Tobacco (Row Crops)	28.52
Farmsteads and Ranch Headquarters	1.56

**Table 4-143. Annual Estimated Total Soil Loss in Subwatershed 051301050502.**

**4.2.E.iii. 051301050503 (Mitchell Creek).**

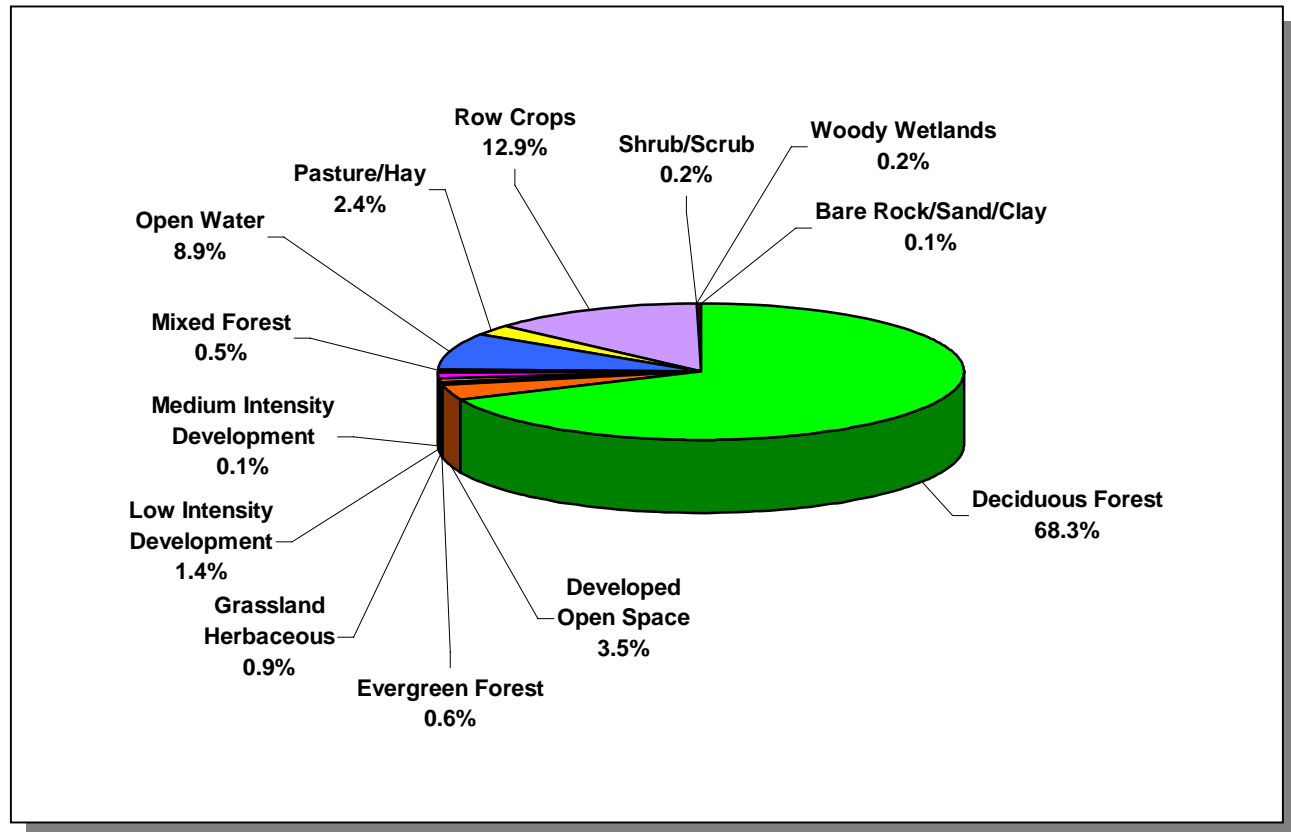


**Figure 4-149. Location of Subwatershed 051301050503.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.



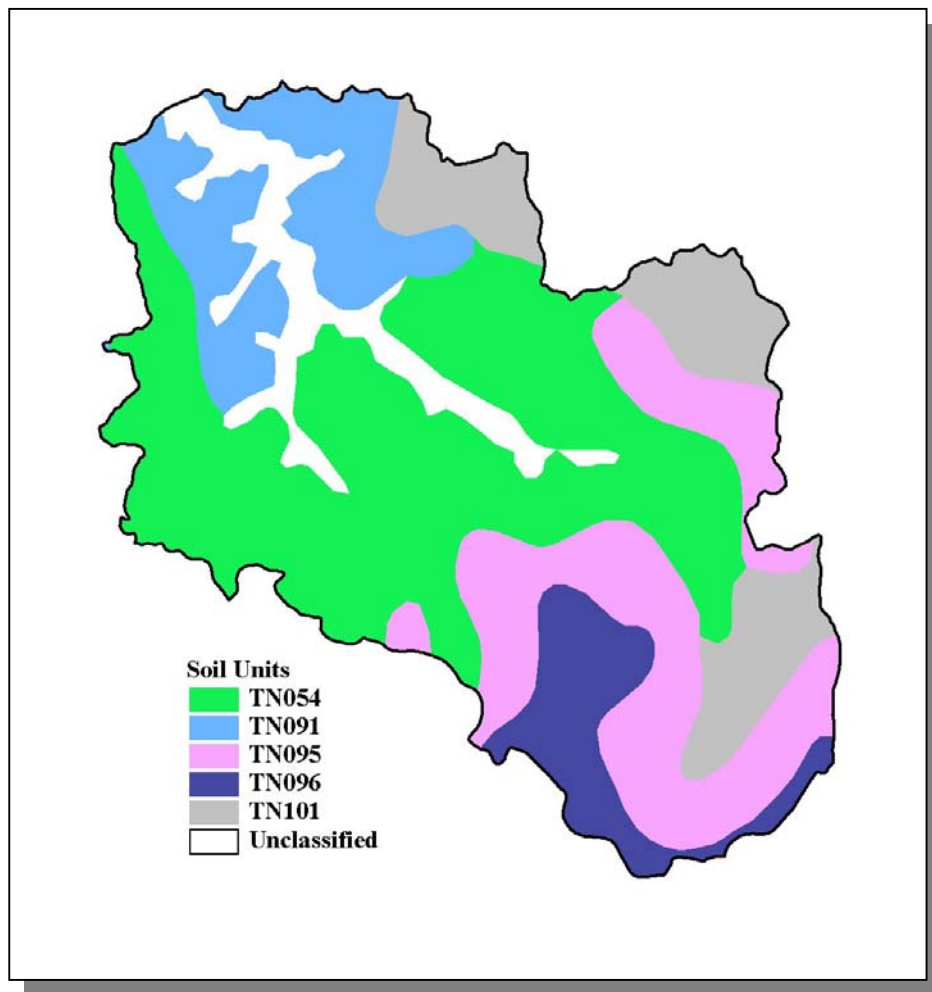
**Figure 4-150. Illustration of Land Use Distribution in Subwatershed 051301050503.**

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**Figure 4-151. Land Use Distribution in Subwatershed 051301050503.** More information is provided in Appendix IV.

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**Figure 4-152. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050503.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN091	0.00	B	2.95	5.86	Loam	0.34
TN095	0.00	B	2.35	5.12	Loam	0.31
TN096	10.00	C	1.22	5.16	Silty Loam	0.38
TN101	0.00	B	1.71	5.39	Loam	0.35

**Table 4-144. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050503.** The definition of "Hydrologic Group" is provided in Appendix IV.

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	COUNTY POPULATION				ESTIMATED POPULATION IN WATERSHED			
County	1990	1997	2000	Portion of Watershed (%)	1990	1997	2000	% Change (1990-2000)
Clay	7,238	7,311	7,976	2.94	213	215	234	9.9
Overton	17,636	19,171	20,118	3.6	635	690	724	14.0
<b>Total</b>	<b>24,874</b>	<b>26,482</b>	<b>28,094</b>		<b>848</b>	<b>905</b>	<b>958</b>	<b>13.0</b>

*Table 4-145. Population Estimates in Subwatershed 051301050503.*

**4.2.E.iii.a. Point Source Contributions.**

There are no point source contributions in this subwatershed.

**4.2.E.iii.b. Nonpoint Source Contributions.**

LIVESTOCK COUNTS					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
432	1,044	34	<5	26	<5

**Table 4-146. Summary of Livestock Count Estimates in Subwatershed 051301050503.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

LIVESTOCK COUNTS						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Clay	0	14,574	0	18	174	23
Overton	15,150	27,812	1,200	1,173	811	59

**Table 4-147. Summary of Livestock Count Estimates in Clay and Overton Counties.**  
According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	INVENTORY		REMOVAL RATE	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Clay	105.1	105.1	2.3	10.1
Overton	170.3	170.3	1.7	7.0

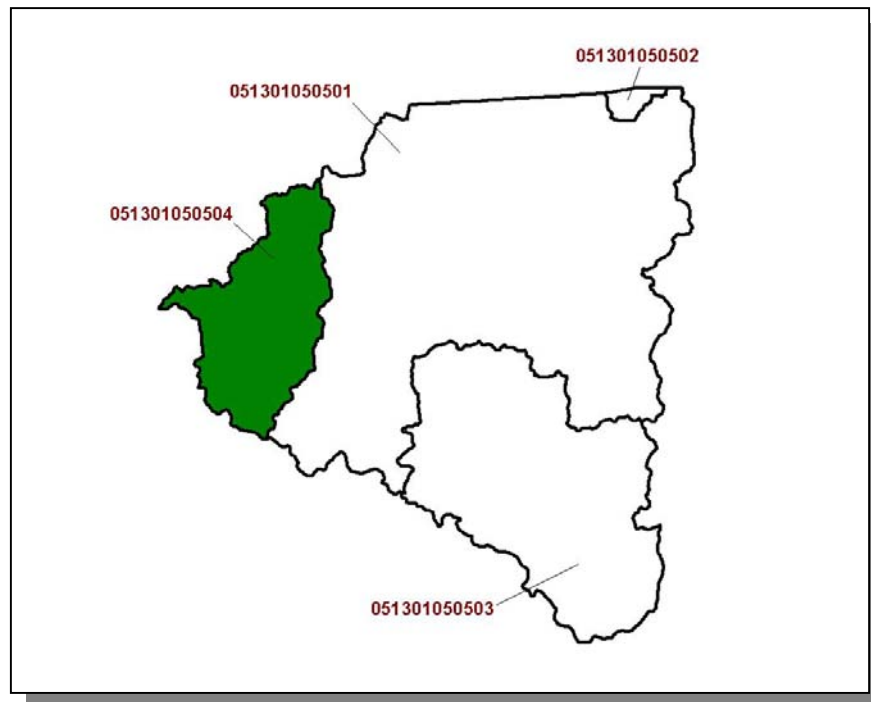
**Table 4-148. Forest Acreage and Annual Removal Rates (1987-1994) in Clay and Overton Counties.**

CROPS	TONS/ACRE/YEAR
Grass (Pastureland)	0.55
Grass (Hayland)	0.34
Legumes, Grass (Hayland)	2.11
Grass, Forbs, Legumes (Mixed Pasture)	0.90
Corn (Row Crops)	4.35
Soybeans (Row Crops)	10.79
Tobacco (Row Crops)	28.52
Wheat (Close-Grown Cropland)	7.00
Other Vegetable and Truck Crops	21.46
Conservation Reserve Program Lands	0.46
Farmsteads and Ranch Headquarters	0.91

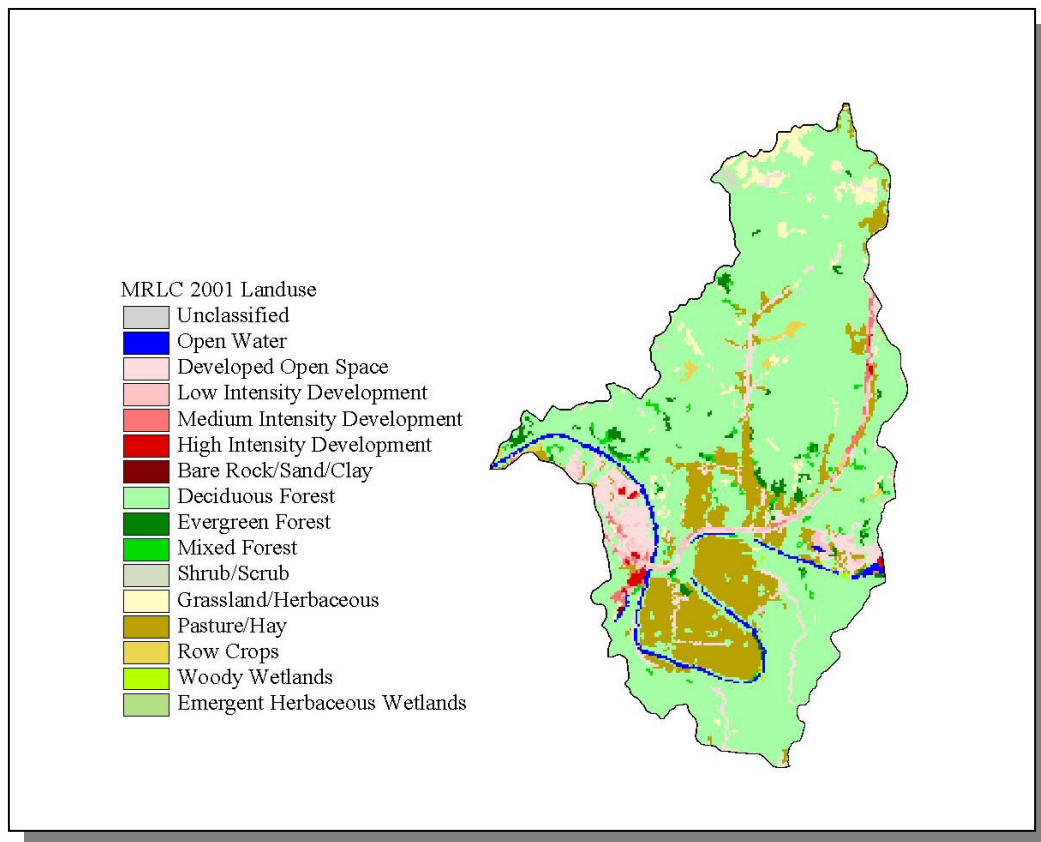
**Table 4-149. Annual Estimated Total Soil Loss in Subwatershed 051301050503.**



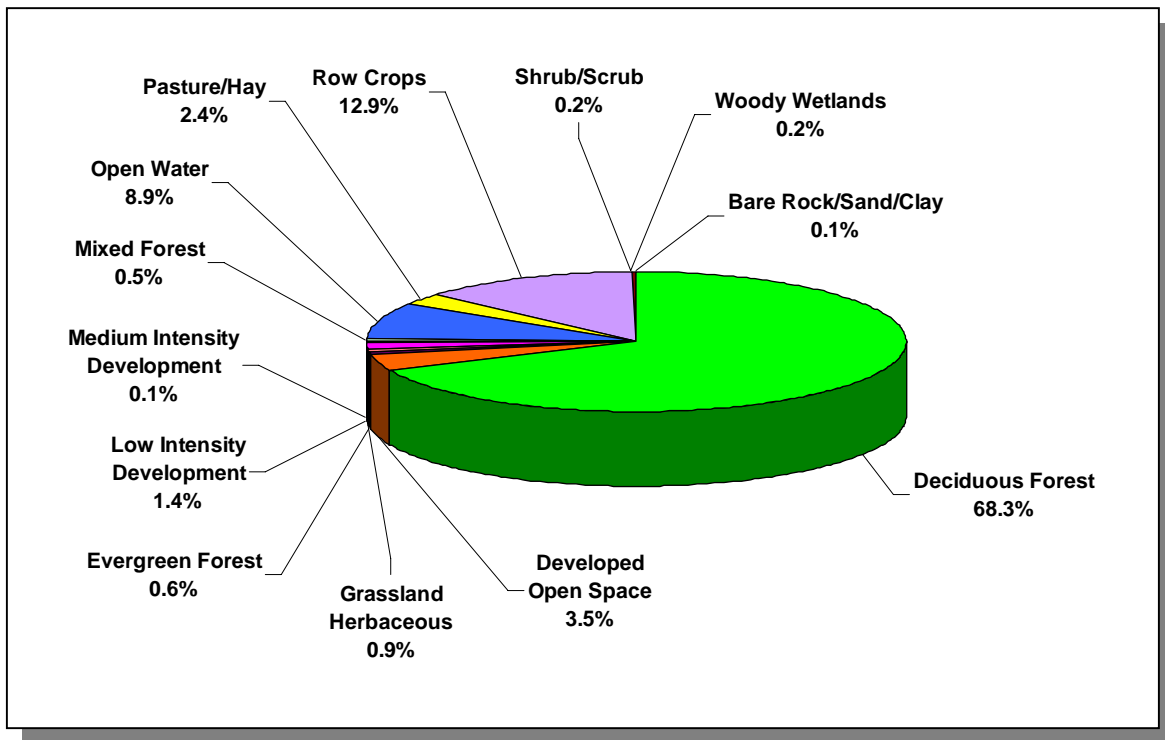
**4.2.E.iv. 051301050504 (Obey River).**



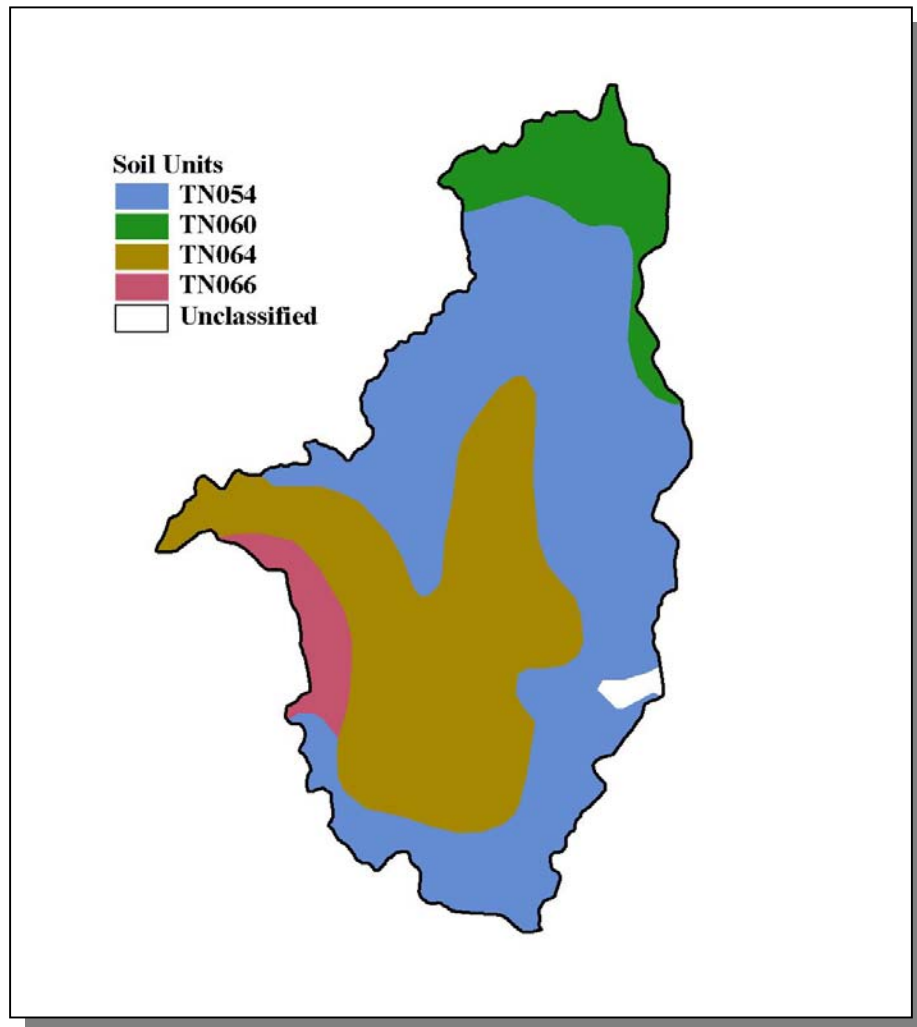
**Figure 4-153. Location of Subwatershed 051301050504.** All Obey River HUC-12 subwatershed boundaries in Tennessee are shown for reference.



**Figure 4-154. Illustration of Land Use Distribution in Subwatershed 051301050504.**



**Figure 4-155. Land Use Distribution in Subwatershed 051301050504.** More information is provided in Appendix IV.



**Figure 4-156. STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050504.**

STATSGO MAP UNIT ID	PERCENT HYDRIC	HYDROLOGIC GROUP	PERMEABILITY (in/hour)	SOIL pH	ESTIMATED SOIL TEXTURE	SOIL ERODIBILITY
TN054	0.00	C	3.04	4.84	Loam	0.32
TN060	20.00	B	1.30	5.32	Silty Loam	0.39
TN064	14.00	C	1.19	5.82	Silty Loam	0.37
TN066	0.00	B	2.62	4.75	Loam	0.28

**Table 4-150. Soil Characteristics by STATSGO (State Soil Geographic Database) Soil Map Units in Subwatershed 051301050504.** The definition of "Hydrologic Group" is provided in Appendix IV.

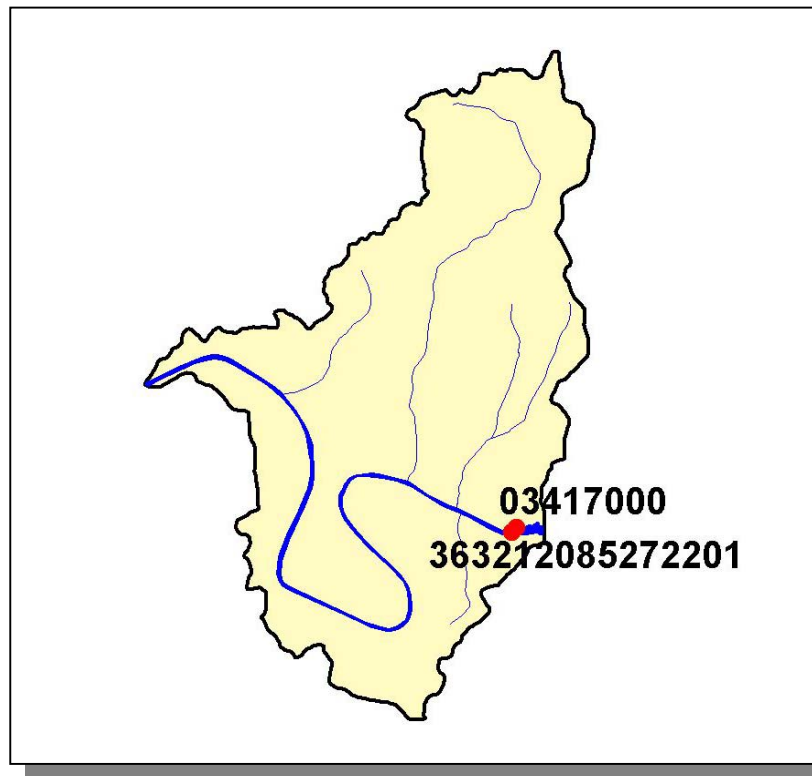
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County	COUNTY POPULATION			Portion of Watershed (%)	ESTIMATED POPULATION IN WATERSHED			% Change (1990-2000)
	1990	1997	2000		1990	1997	2000	
Cumberland	34,736	43,217	46,802	1.63	566	705	763	34.8
Overton	17,636	19,171	20,118	0.24	43	46	49	14.0
Putnam	51,373	58,326	62,315	4.56	2,342	2,659	2,841	21.3
<b>Total</b>	<b>103,745</b>	<b>120,714</b>	<b>129,235</b>		<b>2,951</b>	<b>3,410</b>	<b>3,653</b>	<b>23.8</b>

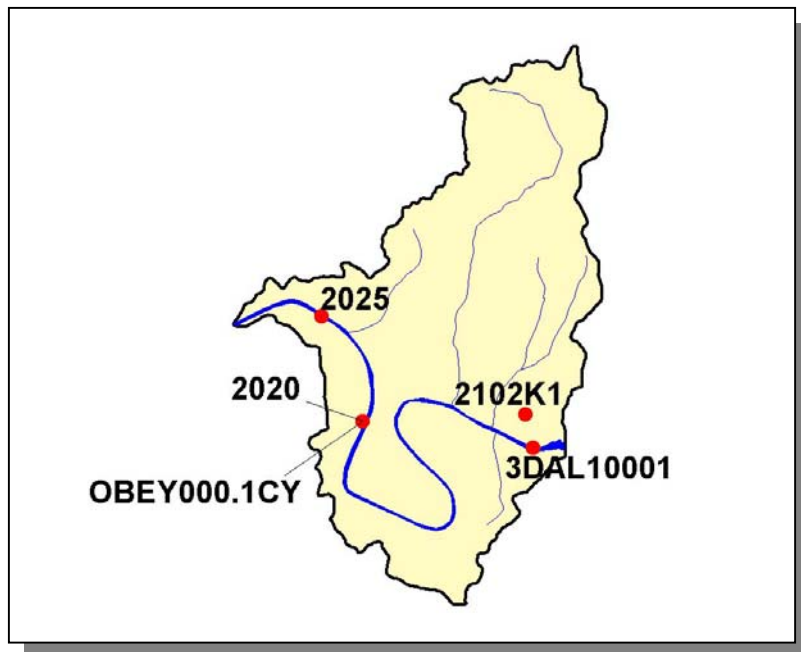
*Table 4-151. Population Estimates in Subwatershed 051301050504.*

Populated Place	County	Population	NUMBER OF HOUSING UNITS			
			Total	Public Sewer	Septic Tank	Other
Monterey	Putnam	2,559	1,113	875	28	10

*Table 4-152. Housing and Sewage Disposal Practices of Select Communities in Subwatershed 051301050504.*

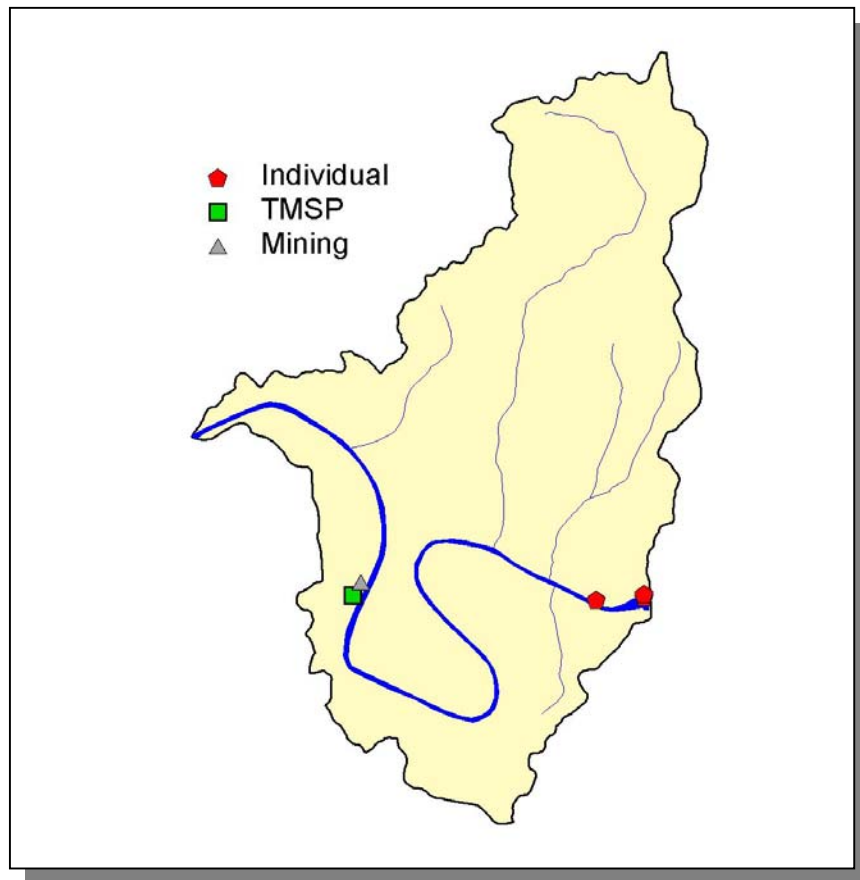


**Figure 4-157. Location of Historical Streamflow Data Collection Sites in Subwatershed 051301050504.** More information is provided in Appendix IV.



**Figure 4-158. Location of Monitoring Sites in EPA's STORET Database in Subwatershed 051301050504.** More information, including site names and locations, is provided in Appendix IV.

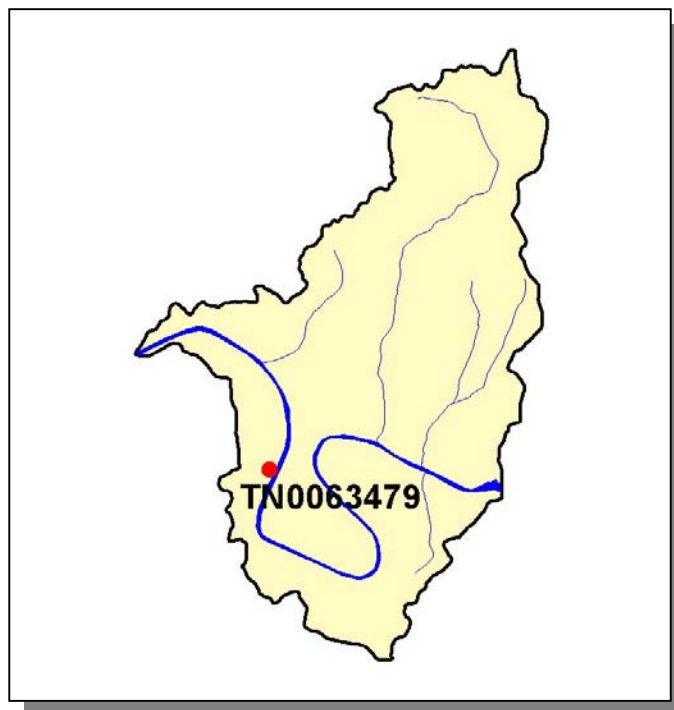
**4.2.E.iv.a. Point Source Contributions.**



**Figure 4-159. Location of Permits Issued in Subwatershed 051301050504.** More information, including the names of facilities, is provided in Appendix IV.

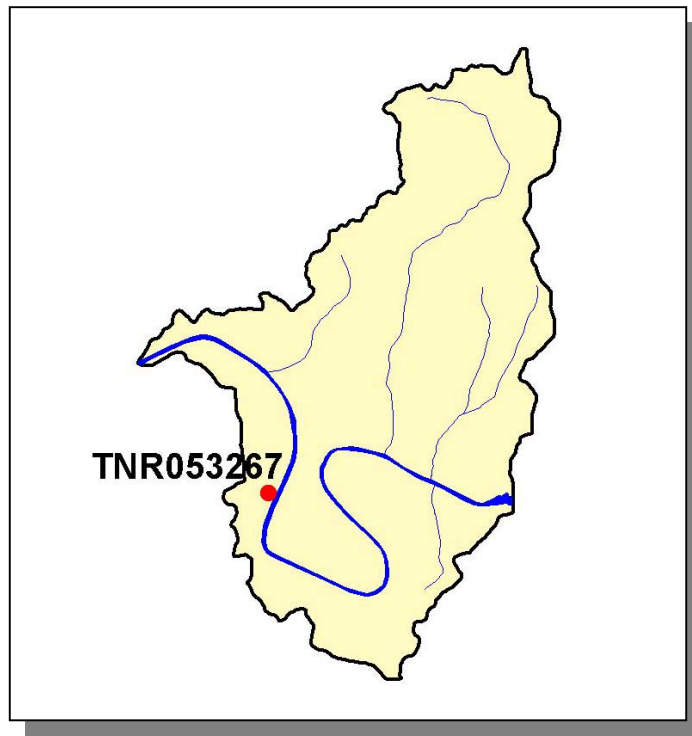


**Figure 4-160. Location of Active NPDES Sites in Subwatershed 051301050504.** More information, including the names of facilities, is provided in Appendix IV.



**Figure 4-161. Location of Active Mining Sites in Subwatershed 051301050504.** More information, including the names of mining operations, is provided in Appendix IV.



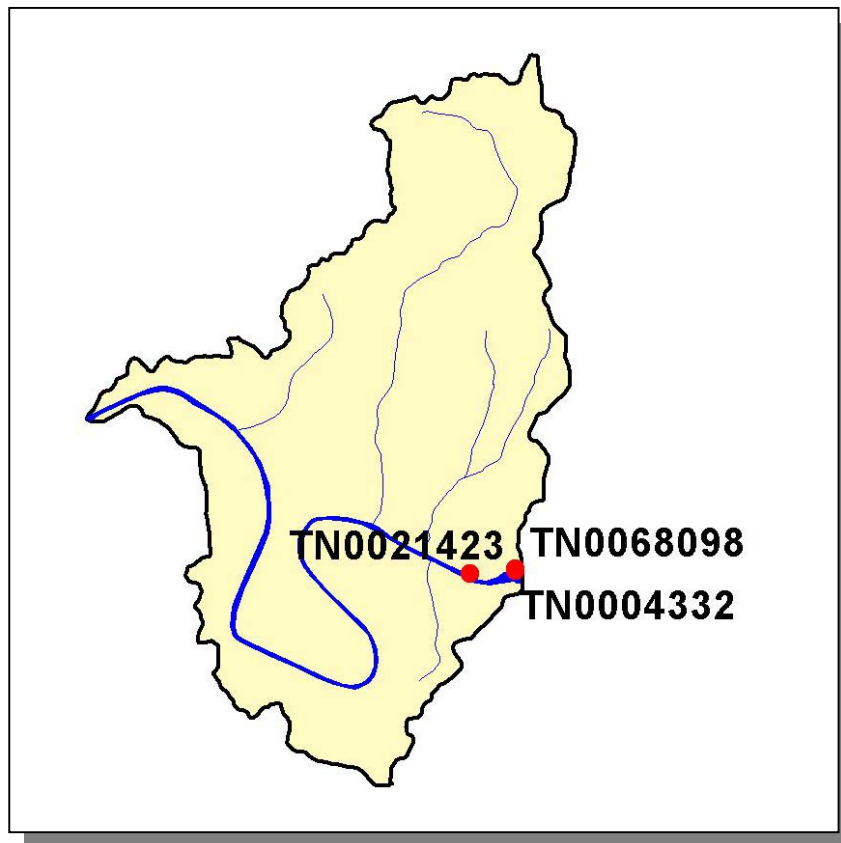


**Figure 4-162. Location of TMSF Sites in Subwatershed 051301050504.** More information, including the names of facilities, is provided in Appendix IV.

**4.2.E.iv.a.i. Dischargers to Water Bodies Listed on the 2004 303(d) List**

There are three NPDES facilities discharging to water bodies listed on the 2004 303(d) list in Subwatershed 051301050504:

- TN0004332 (USFWS Dale Hollow National Fish Hatchery) discharges to Dry Branch @ RM 0.1
- TN0021423 (USACOE Dale Hollow Dam Shop STP) discharges to Obey River @ RM 7.0 and @ RM 6.6
- TN0068098 (Dale Hollow Hydro Power Plant) discharges to the Obey River @ RM 7.3



**Figure 4-163. Location of NPDES Dischargers to Water Bodies Listed on the 2004 303(d) List in Subwatershed 051301050504.** More information, including the names of facilities, is provided in Appendix IV.

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PERMIT #	1Q10	3Q10	7Q10	3Q20	QDESIGN
TN0004332					
TN0021423					
TN0068098					

**Table 4-153. Receiving Stream Flow Information for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051301050504.** Data are in million gallons per day (MGD). Data were obtained from the USGS publication *Flow Duration and Low Flows of Tennessee Streams Through 1992* or from permit files.

PERMIT #	FLOW
TN0004332	X
TN0021423	X
TN0068098	X

**Table 4-154. Monitoring Requirements for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051301050504.**

PERMIT #	WET	CBOD <sub>5</sub>	NH <sub>3</sub>	TRC	TSS	SETTLEABLE SOLIDS	PCB	DO	pH
TN0004332	X		X		X	X		X	X
TN0021423		X		X		X		X	X
TN0068098						X	X		

**Table 4-155. Parameters Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051301050504.** WET, Whole Effluent Toxicity; CBOD<sub>5</sub>, Carbonaceous Biochemical Oxygen Demand (5-Day); TRC, Total Residual Chlorine; TSS, Total Suspended Solids.

PERMIT #	<i>E. coli</i>	FECAL COLIFORM
TN0021423	X	X

**Table 4-156. Bacteria Monitored for Daily Maximum Limits for NPDES Dischargers to Waterbodies Listed on the 2004 303(d) List in Subwatershed 051301050504.**

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**4.2.E.iv.b. Nonpoint Source Contributions.**

<b>LIVESTOCK COUNTS</b>					
Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
320	662	39	<5	66	5

**Table 4-157. Summary of Livestock Count Estimates in Subwatershed 051301050504.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

<b>LIVESTOCK COUNTS</b>						
County	Beef Cow	Cattle	Milk Cow	Chickens (Layers)	Hogs	Sheep
Cumberland	9,468	23,179	2,296	43	6,038	461
Overton	15,150	27,812	1,200	1,173	811	59
Putnam	12,592	24,817	1,095	1,025	1,070	66

**Table 4-158. Summary of Livestock Count Estimates in Cumberland, Overton, and Putnam Counties.** According to the 1997 Census of Agriculture (<http://www.nass.usda.gov/census/>), "Cattle" includes heifers, heifer calves, steers, bulls and bull calves; "Chickens" are layers 20 weeks and older.

County	<b>INVENTORY</b>		<b>REMOVAL RATE</b>	
	Forest Land (thousand acres)	Timber Land (thousand acres)	Growing Stock (million cubic feet)	Sawtimber (million board feet)
Cumberland	320.3	320.3	5.9	22.5
Overton	170.3	170.3	1.7	7.0
Putnam	152.5	152.3	3.6	16.4

**Table 4-159. Forest Acreage and Annual Removal Rates (1987-1994) in Cumberland, Overton, and Putnam Counties.**

<b>CROPS</b>	<b>TONS/ACRE/YEAR</b>
Legumes (Pastureland)	0.15
Grass (Pastureland)	1.30
Grass (Hayland)	2.10
Legumes, Grass (Hayland)	0.53
Legumes (Hayland)	0.23
Grass, Forbs, Legumes (Mixed Pasture)	0.70
Corn (Row Crops)	3.82
Soybeans (Row Crops)	6.65
Tobacco (Row Crops)	12.38
Wheat (Close-Grown Cropland)	7.00
Other Vegetable and Truck Crops	14.63
Conservation Reserve Program Lands	0.46
Farmsteads and Ranch Headquarters	0.23

**Table 4-160. Annual Estimated Total Soil Loss in Subwatershed 051301050504.**